

DOCUMENT RESUME

ED 173 342

SP 014 479

TITLE Tennis--Badminton--Squash. May 1978-May 1980. NAGWS Guide.

INSTITUTION American Alliance for Health, Physical Education, and Recreation, Washington, D.C. National Association for Girls and Women in Sport.

PUB DATE 78

NOTE 222p.

AVAILABLE FROM American Alliance for Health, Physical Education, Recreation, and Dance Publication Sales, 1201 16th St. N.W., Washington, D.C. 20036 (\$2.50)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.

DESCRIPTORS *Squash (Game); Standards; Teaching Techniques; *Tennis; *Womens Athletics

IDENTIFIERS *Badminton

ABSTRACT

The official rules governing womens' participation in tennis, badminton, and squash competition are presented. Teaching suggestions for coaches are included. (JD)

* Reproductions supplied by EDRS are the best that can be made *

* from the original document. *

EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY.

NAGWS quarterly

National Association for Girls & Women in Sport



Tennis Badminton Squash

MAY 1978 – MAY 1980

With Official Rules

"PERMISSION TO REPRODUCE THIS
MATERIAL IN MICROFICHE ONLY
HAS BEEN GRANTED BY

J. Anderson

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."

Sports Library for Girls and Women

NAGWS SPORTS LIBRARY

NAGWS SPORTS GUIDES

Next Edition Available:

ARCHERY-FENCING 1978-80 (243-26178) \$2.50	May 1980
BASKETBALL 1978-79 (243-26180) \$2.00	July 1979
BOWLING-GOLF 1979-81 (avail. Jan. 1979) \$2.50	Jan. 1981
COMPETITIVE SWIMMING & DIVING 1978-79 (243-26184) \$2.00	Aug. 1979
FIELD HOCKEY 1978-80 (243-26186) \$2.50	June 1980
FLAG FOOTBALL-SPEEDBALL 1978-80 (243-26190) \$2.50	June 1980
GYMNASTICS 1978-80 (243-26192) \$4.50	May 1980
LACROSSE 1978-80 (243-26194) \$2.50	Sept. 1980
SOCCER 1978-79 (243-26200) \$2.00	Apr. 1979
SOFTBALL 1977-79 (243-25956) \$2.25	Jan. 1979
SYNCHRONIZED SWIMMING 1978-79 (243-26146) \$2.00	Jan. 1979
TENNIS-BADMINTON-SQUASH 1978-80 (243-26204) \$2.50	May 1980
TEAM HANDBALL-RACQUETBALL-ORIENTEERING 1976-78 (243-25850) \$2.75	Apr. 1979
TRACK AND FIELD 1978-79 (243-26206) \$2.00	Sept. 1979
VOLLEYBALL 1978-79 (243-26208) \$2.00	June 1979

RULEBOOKS

BASKETBALL 1978-79 (243-26182) 75¢	July 1979
SKIING 1978-80 (243-26198) \$2.00	Sept. 1980
SOCCER 1978-79 (243-26202) 75¢	Apr. 1979
SOFTBALL 1977-79 (243-25958) 75¢	Jan. 1979
VOLLEYBALL 1978-79 (243-26210) 75¢	June 1979

TIPS AND TECHNIQUES BOOKS

AQUATICS (Vol. I) (243-26024) \$2.25	Aug. 1979
BASKETBALL-VOLLEYBALL (Vol. I) (243-26026) \$2.25	July 1979

ORDER FROM: AAHPER Publications Sales
1201 16th St., N.W.
Washington, DC 20036

NAGWS guide

Tennis Badminton Squash

MAY 1978 – MAY 1980

With Official Rules

Guide Coordinator, PAT SHERMAN
University of Wisconsin, River Falls

Guide Chairpersons
Tennis, JAVENE YOUNG, Eaton,
New York
Badminton, SYBIL P. HILTON, Bakersfield
College, California
Squash, JANE MILLSPAUGH, Trinity College,
Hartford, Connecticut

NATIONAL ASSOCIATION FOR GIRLS
& WOMEN IN SPORT
American Alliance for Health,
Physical Education, and Recreation



Copyright © 1978 by the

**National Association for Girls and Women in Sport
American Alliance for Health, Physical Education, and Recreation**

Published by the
**AMERICAN ALLIANCE FOR HEALTH,
PHYSICAL EDUCATION, AND RECREATION**

1201 Sixteenth St., N.W.

Washington, DC 20036

CONTENTS

Foreword	5
NATIONAL ASSOCIATION FOR GIRLS AND WOMEN IN SPORT	7
Standards in Sports for Girls and Women	9
National Coaches Council	10
Sports Academies of the National Coaches Council	11
NAGWS Sports Guides Committees Interest Indicator	13
TENNIS	15
BADMINTON	111
SQUASH	153
OFFICIATING	
NAGWS Affiliated Boards of Officials	181
Statement of Philosophy of the Affiliated Boards of Officials	183
Standards for Officials Ratings in Tennis and Badminton	184
Information for Affiliated Boards	190
Techniques of Officiating Tennis	193
Tennis Study Questions	201
Techniques of Officiating Badminton	206
Badminton Study Questions	217

FOREWORD

On behalf of the National Association for Girls and Women in Sport, it is a pleasure to communicate (even if indirectly) with *you*, the people who utilize *NAGWS Guides*. We are proud of our *Guide* publications. Now, and through the long GWS "herstory," the *Guides* have been the products of individuals with sport expertise and a deep dedication to the good of those who play. This is the timeless promise of these little books.

We are very proud of you, too. Your efforts have kept girls and women's sport programs alive through the lean years and are now providing the energy and direction for the fastest growth of sport programs ever. Your continued use of the *Guides* provides support to the entire range of activities in which NAGWS is involved on behalf of you and girls and women everywhere.



CAROLE A. OGLESBY
NAGWS President

With commitment
to those who play:
in *that* we never
change.

Interest and participation in sports have expanded by leaps and bounds at all age levels. Such expansion has resulted in a demand for more knowledgeable and better qualified people to work with these highly interested, motivated and skilled individuals. This *Guide* is designed to assist instructors, coaches and officials in facilitating the growth of quality sport programs at the elementary, secondary and collegiate levels, as well as in non-school settings. You will find articles covering a wide spectrum which have been written by outstanding coaches, officials, instructors and competitors. In addition, official rules, officiating techniques, study questions, tournament information and an updated list of audiovisual aids and references are included.



PAT SHERMAN
NAGWS
Guide Coordinator

We hope you will find this *NAGWS Guide*, as well as others covering additional sports, of value. Your input is invited.

NATIONAL ASSOCIATION FOR GIRLS AND WOMEN IN SPORT

The National Association for Girls and Women in Sport is a nonprofit, educational organization designed to serve the needs of participants, teachers, coaches, leaders and administrators in sports programs for girls and women. It is one of seven associations of the American Alliance for Health, Physical Education, and Recreation.

Purpose

The purpose of the National Association for Girls and Women in Sport is to foster the development of sports programs for the enrichment of the life of the participant.

Beliefs

The National Association for Girls and Women in Sport believes that:

Sports are an integral part of the culture in which we live.

Sports programs are a part of the total educational experience of the participant when conducted in educational institutions.

Opportunities for instruction and participation in sports appropriate to her skill level should be included in the experience of every girl.

Sports skills and sports participation are valuable social and recreational tools which may be used to enrich the lives of women in our society.

Competition and cooperation may be demonstrated in all sports programs, although the type and intensity of the competition and cooperation will vary with the degree or level of skill of the participants.

An understanding of the relationship between competition and cooperation and the utilization of both within the accepted framework of our society is one of the desirable outcomes of sports participation.

Physical activity is important in the maintenance of the general health of the participant.

Participation in sports contributes to the development of self-confidence and to the establishment of desirable interpersonal relationships.

Functions

The National Association for Girls and Women in Sport promotes desirable sports programs through:

1. Formulating and publicizing guiding principles and standards for the administrator, leader, official, and player.
2. Publishing and interpreting rules governing sports for girls and women.
3. Providing the means for training, evaluating, and rating officials.
4. Disseminating information on the conduct of girls and women's sports.
5. Stimulating, evaluating, and disseminating research in the field of girls and women's sports.
6. Cooperating with allied groups interested in girls and women's sports in order to formulate policies and rules that affect the conduct of women's sports.
7. Providing opportunities for the development of leadership among girls and women for the conduct of their sports programs.

STANDARDS IN SPORTS FOR GIRLS AND WOMEN

Standards in sports activities for girls and women should be based upon the following:

1. Sports activities for girls and women should be taught, coached, and officiated by qualified women whenever and wherever possible.
2. Programs should provide every girl with a wide variety of activities.
3. The results of competition should be judged in terms of *benefits to the participants* rather than by the winning of championships or the athletic or commercial advantage to schools or organizations.

Health and Safety Standards for Players

Careful supervision of the health of all players must be provided by—

1. An examination by a qualified physician
2. Written permission by a qualified physician after serious illness or injury
3. Removal of players when they are injured or overfatigued or show signs of emotional instability
4. A healthful, safe, and sanitary environment for sports activity
5. Limitation of competition to a geographical area which will permit players to return at reasonable hours; provision of safe transportation.

General Policies

1. Select the members of all teams so that they play against those of approximately the same ability and maturity.
2. Arrange the schedule of games and practices so as not to place demands on the team or player which would jeopardize the educational objectives of the comprehensive sports program.
3. Discourage any girl from practicing with, or playing with, a team for more than one group while competing in that sport during the same sport season.
4. Promote social events in connection with all forms of competition.

SOURCES OF INFORMATION AND SERVICE

All requests for information about services should be addressed to: Executive Secretary, National Association for Girls and Women in Sport (NAGWS), AAHPER, 1201-16th Street, N.W., Washington, D.C. 20036.

NATIONAL COACHES COUNCIL

The National Coaches Council was formed by the NAGWS to:

- (1) provide a channel of direct communication among coaches at all educational levels
- (2) assist in the formulation and dissemination of guiding principles, standards and policies for conducting competitive sports programs for girls and women
- (3) keep members informed of current coaching techniques and trends
- (4) sponsor clinics and conferences in sports and coaching skills
- (5) provide input from coaches to USCSC sports committees and representative assembly
- (6) promote cooperative efforts with other sports-centered organizations
- (7) provide a united body for positive political action in the realm of girls and women's athletics.

Academies for 10 sports have been established. (Note the application blank for specific listings.) Membership in each Academy is open to any coach of girls or women's sports or any interested person. Annual dues for AAHPER members are \$5.00 for one Academy. Non-AAHPER members pay \$15.00 annually for membership in one sport Academy. Membership for each additional Academy is \$2.00. The \$10.00 non-membership fee may be applied at any time toward AAHPER membership.

Get involved . . . JOIN NOW.

Sports Academies of the NATIONAL COACHES COUNCIL

National Association for Girls and Women in Sport: AAHPER
1201 16th St., N.W., Washington, D.C. 20036

NAME _____
last first initial

ADDRESS _____
street
city state zip

FOR OFFICE USE:

DT: _____ AMT: _____
CK: _____

AAHPER MEMBERS: Membership number as it appears on your journal label: _____
Teaching/Coaching level (please check): _____ College _____ Jr. College _____ High School
Jr. High _____ Elementary _____ Other _____

Please check the academies you wish to join: * ☐ Badminton ☐ Basketball ☐ Field Hockey
☐ Gymnastics ☐ Softball ☐ Swimming/Diving ☐ Synchronized Swimming ☐ Tennis
☐ Track & Field ☐ Volleyball

I am willing to serve on an Academy committee: ☐

*AAHPER members: \$5.00 for one Academy and \$2.00 for each additional Academy. Non-AAHPER members: \$15.00 for one Academy and \$2.00 each additional Academy. (\$10.00 non-membership fee may be applied at any time toward AAHPER membership.)

Please send AAHPER membership information: _____ yes _____ no

NAGWS SPORTS GUIDES COMMITTEES INTEREST INDICATOR

The NAGWS Sport Guide Committee is endeavoring to broaden its base of personnel and to strengthen services to *Guide* readers. The purpose of this form is to offer readers an opportunity to join us in meeting this need. Please complete this form and send it to the Associate Guide Coordinator-elect, Mary Beth Cramer, Penn State University, White Building, University Park, PA 16802.

Name _____

Professional Address _____

City _____ State _____ ZIP Code _____

1. Check the Sport Committee(s) which would be of interest to you:

☐ Aquatics	☐ Fencing	☐ Soccer
☐ Archery	☐ Field Hockey	☐ Softball
☐ Badminton	☐ Flag Football	☐ Speedball
☐ Basketball	☐ Golf	☐ Squash
☐ Bowling	☐ Gymnastics	☐ Synchronized Swimming
☐ Competitive Swimming	☐ Lacrosse	☐ Team Handball
☐ Cross-country Track	☐ Orienteering	☐ Tennis
☐ Cross-country Skiing	☐ Racquetball	☐ Track and Field
☐ Diving	☐ Skiing	☐ Volleyball
		☐ Water Polo

2. Would you like to serve as member of a Sports Guide Committee of your interest? * ☐ Yes ☐ No

3. Would you consider submitting an article to a Guide Committee as a prospective author? ☐ Yes ☐ No
Possible topic or title _____

4. Can you suggest topics for articles which you would like to have included in future *Guides*? (Please indicate sport.) _____

5. Are there others whom you would recommend for consideration as possible committee members or authors? Please indicate below. (Use additional paper, if necessary.)

Name _____ Sport(s) _____

Professional Address _____

City _____ State _____ Zip Code _____

Sports Committee Member ☐ Prospective Author ☐ (Check one)

*You may serve on only one Sport Guide Committee at a time.

Tennis

Introduction	<i>Javene Young</i>	16
------------------------	---------------------	----

COMMITTEES AND ARTICLES

NAGWS Tennis Guide Committees		17
From Head to Toe – Common “Uncommon”		
Tennis Injuries	<i>Holly Wilson</i>	20
Effective Receiving Positions in		
Doubles	<i>Bernice J. Goldstein</i>	25
Teaching the Serve	<i>Kathy Rowlett</i>	29
Surfaces and How They Influence Style		
of Play	<i>Sharon Mathis</i>	34
Psychological Aspects of Coaching		
Tennis	<i>Charlotte E. Peterson</i>	37
Videotaping – for Teaching and		
Coaching Tennis	<i>Anne E. McConnell</i>	41
Van der Meer Warm-up Drill	<i>Bonnie Slatton</i>	44
The Left-Handed Opponent	<i>Kathleen A. Cordes and Jane P. Lammers</i>	47
Power and Control in a Tennis Skills Test	<i>Lark Birdsong</i>	50
Contract Teaching	<i>Phyllis A. Jacobson</i>	54
Tennis Visual Aids	Revised by <i>Mildred B. West</i>	58
Annotated Tennis Bibliography	Revised by <i>Bernice Goldstein</i>	62

RULES

Rules of Lawn Tennis and Cases and Decisions	66
How To Lay Out a Tennis Court	89
USTA Tournament Regulations	91
USTA Junior Davis Cup Sectional Team Championship	103
USTA Girls' National Intersectional Team Championships	104
USTA Point Penalties System	106
Rules of VASS 'Single Point' Handicap Play	108
VASS Rules for Scoring Round Robin Medal Play (RRMP)	109

Introduction

This *Tennis Guide* was developed with the hope that the information will be timely and useful for readers in the educational and coaching world of tennis. All authors are active coaches, players or teachers and have shared the expertise they have developed over a long period of time. We extend our sincerest appreciation to the United States Tennis Association for providing the most up-dated set of rules.

We hope we have prepared a *Guide* that will be helpful to you, the readers. We would also like to encourage you to join the ranks as NAGWS volunteers to write or edit for the next *Guide*.

I would like to thank my committee members for the work and Pat Sherman for her continuous support.

Javene Young, Chairperson
NAGWS Tennis Guide Committee

NAGWS TENNIS GUIDE COMMITTEE*
1976-1978

JAVENE YOUNG, *Chairperson*, Eaton, NY 13334
BERNICE GOLDSTEIN, *Chairperson-elect*, Bayside, NY 11364
CHARLOTTE PETERSON, Memphis State University, Memphis, TN 38152
MILDRED WEST, College of William and Mary, Williamsburg, VA 23185
SHARON VAN OTEGHEN, Memphis State University, Memphis, TN 38152
PHYLLIS JACOBSON, Marian College, Indianapolis, IN 46234
BONNIE SLATTON, University of Iowa, Iowa City, IA 52240
KATHY CORDES, University of Notre Dame, Notre Dame, IN 46556
BARBARA BERNARD, Northwest Missouri State University, Maryville, MO 64468
BARBARA GARRETT, Mississippi University for Women, Columbus, MS 39701
MARY JO WYNN, Southwest Missouri State University, Springfield, MO 65802
JUDY AULD, Southern Illinois University, Carbondale, IL 62901

NAGWS TENNIS COMMITTEE
1978-1980

BERNICE GOLDSTEIN, *Chairperson*, 56-19 Bell Blvd., Bayside NY 11364
JAVENE YOUNG, *Past Chairperson*, Morrisville-Eaton Rd., Eaton, NY 13334
DARLENE M. KOENIG, University of California, Santa Barbara, 93106
LINDA REISER, Developmental Research School, Tallahassee, FL
KATHY CORDES, St. Mary's College, Notre Dame, IN 46556
BONNIE SLATTON, University of Iowa, Iowa City 52240
MILDRED WEST, College of William and Mary, Williamsburg, VA 23185
DONNA CLELAND, University of Mississippi, University 38677

*The current *Guide* was prepared by the 1976-78 Committee. The 1980-82 *Guide* will be prepared by the 1978-80 Committee.



Javene Young



Judy Auld

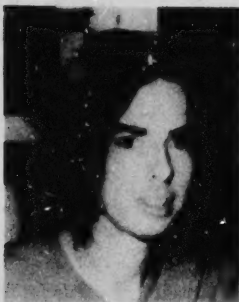


Mildred B. West



Sharon L. Van Oteghen

NAGWS TENNIS-BADMINTON-SQUASH GUIDE



Bernice J. Goldstein



Charlotte Peterson



Bonnie Slatton



Kathy Cordes

NAQWS TENNIS GUIDE COMMITTEES

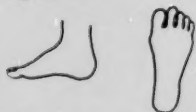
From Head to Toe — Common “Uncommon” Tennis Injuries

HOLLY WILSON

Holly Wilson is an assistant athletic trainer at the University of Iowa, Iowa City. She received both her B.S. and M.S. degrees from Indiana State University, Terre Haute, and in 1970 she was certified by the National Athletic Trainers Association. Currently, Holly is serving as chairperson of the Athletic Training Council, a NAGWS structure.

Tennis Toe

With the increased popularity of artificial materials as court surfaces, friction-type injuries are becoming more prevalent among both weekend and professional athletes. The most common friction-type injury is well known to anyone engaged in athletic activity—the blister; however, now almost every sport has a particular injury often bearing the sport's name. If football has its “Astro toe,” then tennis can have its “tennis toe.” Both result from hyperextension of the metatarsophalangeal (M-P) joint of the great toe and consequent sprain of the capsular ligament.



Figures 1, 2. Metatarsophalangeal Joint.

Tennis toe occurs most often on the pushoff of the serve when the M-P joint is forced beyond its normal range of motion into extreme hyperextension. Less frequently, the great toe joint may be hyperextended on sudden stops when the shoe sole is “grabbed” by the surface of the court.

It is evident that there are certain factors that may predispose the player to an injury of this type—hard surfaces, traction and flexible shoes. All-weather courts appear to be the greatest offenders.

Although there is little anyone can do to change the court surface, one can easily change the structure of shoes. To provide maximum support for the M-P joint and the foot in general, the player should wear a stiffer soled shoe. The shoe should fit properly, for most foot problems arise because the shoe has been fitted incorrectly.

Shoes should be fitted to the length of the arch, not the foot. If the shoe fits the arch, the width will be correct and there will also be

adequate space for the toes. Measurement can be expedited by using a Brannock device; simply measure the length of the foot from the heel to the M-P joint. This device is available from Foot Joy in Brockton, Massachusetts. Shoe fit can easily be checked—the great toe joint should be directly over the widest part of the shoe. If it falls in front, the shoe is too short.

Regardless of the precautions taken, if the M-P joint is hyperextended, the athlete will complain of localized pain that becomes worse with the passage of time. Ability to push off will be impaired. There will be extreme point tenderness over the first metatarsal head and the athlete will experience pain on both passive flexion and extension of the joint. After approximately 24 hours, signs of acute inflammation will be evident—swelling, redness and local increase in temperature.

Immediate treatment consists of ice application in the form of ice packs for 10 to 15 minutes or ice immersion until the part is numb. Instruct the athlete to change to a stiffer soled shoe than the tennis shoe, make a rigid insert from Johnson and Johnson Orthoplast, or tape a wooden block (approximately 3/8" x 3/8" x 3/4") across the widest part of the shoe. Regardless of the technique used—stiffer sole, rigid insert or wooden block, the purpose is to limit hyperextension (pushoff) of the M-P joint when walking.

Continue ice applications, if possible, three times a day until swelling is controlled. Then low heat may be applied perhaps in the form of a whirlpool. Start with tepid water (80-93°F) and over a period of a few days increase the water temperature. Do not go above 104°F. The athlete can work on range of motion, flexion and extension, while receiving the whirlpool treatment. Use pain and swelling as guidelines for the intensity of the rehabilitation workout. If either increases, the athlete has done too much and should cut back.

It may be necessary to restrict the athlete's activity for several days because pain interferes with the player's movement, especially the pushoff.

When the athlete is able to resume activity with no functional disability, it may be necessary to protect the joint against additional repeated stress. This can be accomplished with an arch pad plus hyperextension strapping and shoes with stiffer soles. A daily regimen of physical therapy treatment consisting of heat before activity and ice after, coupled with the strapping and change in shoes, should alleviate any future problems.

The arch pad which is made from 1/4-inch adhesive foam displaces pressure from the M-P joint. Both the inner and outer longitudinal arches are covered, although the ball of the great toe remains uncovered. The edge of the pad slightly overlaps onto the inside of the foot.

The materials needed for the hyperextension strapping are tape adherent, 1-inch white athletic tape, 1½-inch white athletic tape, ¼-inch adhesive foam. If the strapping does not prevent hyperextension of the M-P joint it has not been properly applied.

Preparation for Strapping

1. Instruct the athlete to hold the injured foot at a right angle throughout the strapping process. The M-P joint of the great toe should be slightly flexed.
2. Spray or paint the area with tape adherent and allow to dry.

Strapping

1. Apply an anchor strip of 1-inch tape around the great toe.
2. Start a strip of 1-inch tape on the side of the great toe at the anchor. Go along the side of the foot, across the M-P joint and around the heel. End on the outside edge of the heel (Figure 3).
3. Start a second strip on the side of the great toe, overlapping the first by one-half its width. It should follow the same course as the first (Figure 4).
4. A third strip should overlap the second. It should run along the inner edge of the foot, across the M-P joint and sole of the foot. End on the heel (Figure 5).
5. Continue applying strips of 1-inch tape, overlapping by one-half, until the entire M-P joint is covered. The strips on the sole of the foot should pull the great toe into slight flexion (Figures 6 and 7).
6. Apply the arch pad and hold it in place with an X arch strapping (Figure 8).



Figure 3.



Figure 4.



Figure 5.



Figure 6.



Figure 7.



Figure 8. Arch Pad.

- a. Apply an anchor strip of 1½-inch tape loosely around the foot. Remember the foot will spread out when weight is borne.
- b. Start at the anchor on the sole of the foot. From the little toe side, angle the tape across the sole, around the heel and along the outside of the foot as close to the sole as possible. End on the anchor strip.
- c. Start at the anchor on the sole of the foot. From the great toe side, angle the tape across the sole, around the heel and along the inside of the foot as close to the sole as possible. End on the anchor.
- d. Apply two or three lock strips loosely around the foot. Start at the anchor and work toward the heel. Overlap by one-half. Remember the foot will spread out when weight is borne.

Retinal Detachments

The possibility of retinal detachments exists in any sport involving a moving implement; however, the chances increase as the diameter of the ball becomes smaller and the ball becomes an aerial missile as in tennis.

The player most susceptible to an eye injury is the net player. The ball is traveling faster and with greater force as it crosses the net than when it starts its deceleration in the back court. The net player also has less time to react than a back court player. Chances are increased if the player has certain existing eye conditions such as high myopia (extreme nearsightedness). This would predispose an athlete to retinal problems.

To decrease the possibility of any eye injury, instruct the player how to hold the racket face for protection especially when rushing the net. High risk athletes, those susceptible to retinal detachments, should wear an eye protector of some type—a handball eye protector or sports glasses with shatterproof lenses. Glasses should be held securely in place with an elastic strap available at most sporting goods stores.

If the athlete should receive a blow to the eye, stop play immediately so the eye can be thoroughly examined. Ask the athlete if flashes of light or floating particles were seen upon impact or immediately following impact. Check to see if the visual field is affected.

Have the athlete focus on your index finger as you move your other index finger in an arc from the side of the head toward the athlete's nose. Flick your finger as you slowly move it. Switch hand positions to check the other eye. The athlete should inform you when the finger enters the visual field. There should not be a great discrepancy in the visual fields of the two eyes unless the athlete has a detached retina or a previously existing eyesight problem.

Frequently following a detachment the athlete will complain of the visual field being reduced as if it were blocked off. Other important signs are blurring of vision and double vision.

Don't forget to question the athlete about a possible head injury. The cardinal signs are headache, nausea and dizziness. Check the eyes for dilated pupils. Do not give any medication, not even aspirin for pain. Apply an ice pack to the area for 10 to 15 minutes. Keep the athlete quiet. All eye injuries should be thoroughly examined by an ophthalmologist.

Reference

Seelenfreund, M.H. and Freilich, D.B. Rushing the net and retinal detachment. *Journal of the American Medical Association* 235, no. 25: June 21, 1976, 2723-2726.

Effective Receiving Positions in Doubles

BERNICE J. GOLDSTEIN

Bernice Goldstein is the Women's Varsity Tennis Coach at Nassau Community College, Garden City, New York. She has taught tennis in groups as well as private lessons. She received her B.A. from C.W. Post College in 1971 and her M.A. from New York University in February 1972.

In any doubles game, one of the first decisions one must make is which side of the court a player will play. Often people choose a side by announcing, "My forehand is my best shot." With this pronouncement the choice seems definitive. They have opted for the deuce or right court. How should the coach attack this problem?

The problem is, how can I use my players most effectively once I have designated the doubles pairings? Teams should be made up of a big hitter and a consistent hitter. A good team consists of a fine blending of talent and temperament. The problem then is where can each player be most effective: from the deuce court (right side) or the ad court (left court)? The decision becomes all the more important when one realizes that you can exercise your option only at the beginning of each set. Once a determination is made, receiving positions cannot be altered until a set is completed. When you have made the decision as to which side a person will play, it is highly unlikely that a change in midstream would be wise. Many coaches maintain the same teams and receiving positions for the entire season. With this and the realization that a team must break serve at least once (if you are not playing a tiebreaker) to win the set, this decision is a crucial one.

With all of one's coaching cunning, ultimately each player must feel secure and confident about her or his ability to fulfill the role in a designated position. A poor mental set by the players may be as damaging as poor stroking, tactics and strategy. For in fact, a lack of confidence may lead to any and all of the above. Comfort and confidence go hand in hand.

Combining Right- and Left-Handers

Right- or left-handedness usually plays a part in the determination of alignments. If both members of a team are right-handed or if both are left-handed, then hand dominance is not a factor in positioning. Traditional tennis theory would suggest that the steadier,

more consistent person play the ad court. The rationale is that this player will be receiving on the decisive game points. When the orientation is one right and one left the advantages of each should be considered.

First consider the implications of the right-hander playing the deuce court and the left-hander playing the ad court. The merits of the situation are:

1. Down-the-line passing shots may be hit with the forehand.
2. Angled shots are covered with forehands too.
3. The wide angled serve to the ad court will be received on the forehand, not the backhand as usually anticipated.
4. The doubles alley is covered by the forehand volley.

Assuming the forehands are the stronger shots this alignment has the disadvantages of:

1. leaving the center of the court defended by backhands alone.
2. poaching with a backhand volley; thereby inhibiting one's reach and effectiveness.
3. positioning players so that their overhead smashes will be most vulnerable in the center of the court.

With these points in mind the left-hander would be well-advised to play the deuce court and the right-hander to play the ad court. Inherent advantages in this system include:

1. Forehands are defending the center of the playing area. The forehand angle of return on service can be an aggressive and penetrating shot. The shot is a high percentage one because it is crossing over the lowest part of the net. The shot's value is further enhanced because it isolates play by forcing the server to play the ball.

2. Overheads are taken easily by either player and can be smashed down the center. Right-handers can angle the overhead to their right, and left-handers can hit to their left without having to hit the shot across the body.

3. When poaching, either player will be moving, anticipating a forehand volley.

4. The illusion created is that all returns will be made crosscourt. When the opposing net person is teased toward the center of the court, a down-the-line backhand is a winning return. At this point, even a feeble and late hit backhand will catch the opponents unaware.

Still proceeding on the assumption that most people would prefer to hit a forehand should they be given a choice, one must examine when and where the backhands will be vulnerable in this formation. The left-hander's backhand will be exposed to widely angled serves as well as crosscourt returns from the server. Should the opponents' net player make a volley down the line, one may have to hit the backhand and hope for the best.

The right-hander's backhand will be exposed in the same ways—that is, widely angled serves, crosscourt returns and volleys down-the-line.

When determining which side of the court players will cover, one hopes to be able to play their strengths the majority of the time and limit or protect their weaknesses. One wishes to pressure psychologically and tactically the opposition, and in turn capitalize on errors.

The Right-Handers

When both players on a team are right-handed, how should the players be positioned? Again, comfort is important as is the idea of capitalizing on strengths and limiting liabilities.

The person playing the ad court must be the steady and reliable player. This holds true in all team situations in doubles. Nothing is more disheartening than to have a break point blown into the fence, or hearing the snap of the net cord and seeing the ball fall back onto your own court. As disquieting as this may be to you, it is likewise uplifting for your opponents. Therefore, consistency is a prerequisite for the ad court player.

Should the ad court player have the better of the two backhands? Assuredly, that would be nice. There are several skills that are even more important. The most important is that this person should be the stronger and more consistent player. Quickness and the ability to anticipate play are definite assets. These two factors combined can compensate for a somewhat weaker backhand by giving one the opportunity to run around the backhand.

Assets to look for in the ad court player include the ability to hit the widely angled forehand, a sound overhead and good volleys, especially the forehand.

The player of the deuce court should have the stronger forehand. The forehand should be accurate on the crosscourt and the down-the-line. The lob is an aggressive shot that should be in this player's arsenal. The lob is used to blunt the serve and force the server to retrieve the lob with a backhand.

The Left-Handers

Chances of having a pairing of two left-handers is slight but one should be aware of some of the possibilities and requisite skills. As is the case with right-handers, the person playing the ad court must be a steady player. Here too, good anticipation and quickness are important. A good repertoire of shots should include a widely angled forehand, a good overhead and firm crisp volleys.

The player of the deuce court should have an accurate, sizzling crosscourt. The ability to place the ball down-the-line is also ex-

tremely important. This shot, though not a high percentage shot, will keep the opposition honest. The deuce court player should also possess a fine lob. The lob, when well executed, places enormous pressure on the server.

Conclusion

As a coach, the positioning of receiving players is a weighty decision. Decisions regarding which court one will play should be based on comfort, steadiness and strength of the strokes indicated and hand dominance of the players involved. Choose the team alignments to maximize strengths and increase the team's chances of winning.

Teaching the Serve

KATHY ROWLETT

Kathy Rowlett is active in tennis as a competitor and teacher. She has taught tennis at the high school and college levels and has spent five summers coaching at a private tennis camp. She received her B.S. degree from Southern Illinois University, Carbondale, and her M.S. from the University of Arizona, Tucson. She teaches physical education and coaches volleyball at Stephens College in Columbia, Missouri.

When preparing to teach the serve to a beginning tennis class, inexperienced instructors may be overwhelmed by material written about the serve. They must struggle with contradictions in the literature and select the essential techniques that should be taught to the group. This article suggests one method of teaching the serve to beginners en masse and gives additional information needed by the instructor in the analysis of individual errors.

Essentials for the Group

When introducing the service to the group, the instructor should briefly define the stroke, relate the serve to a long distance throw, and emphasize the necessity of learning to serve correctly. Right and left service court areas should be shown to the group, and desired placement areas should be mentioned. Serving from both courts should be demonstrated to the group. Between demonstrated serves is an excellent time to call the group's attention to the importance of a consistent toss and the manner in which both arms are smoothly coordinated. Legal and preferred positioning behind the baseline and to the right or left of the center mark for singles play should be explained to the group.

All pupils should then be positioned on one side of the court with ample space to swing the racket. Each pupil is given one ball; however, no actual serving will be done. Students should not be looking into the sun. The service consists of several parts, and the majority of students should be able to perform each part correctly before progressing to the next.

Starting the Service

(Note: Instructions for the serve are written in the manner of an instructor teaching the class. All instructions are for right-handers.)

Hold the ball near the fingertips of the left hand—not in the palm. Use the forehand grip. Select an imaginary target and assume a side to net position with the left shoulder pointing to the target. The feet

are about shoulder width apart with the knees relaxed and weight on the forward foot. The racket is tilted at a slightly upward angle with the throat loosely resting in the fingertips of the left hand.

Achieving the Arms-in-Line Position

1. **Weight Shift**—Without moving the arms, shift the weight to the back foot. The back knee is relaxed and the left heel is off the ground.
2. **Right Arm Action**—As the weight shifts back, relax the right arm and allow the racket to pass directly across the knees. At this time the racket makes a half-turn. The racket reaches shoulder height and is pointing directly at the back fence.
3. **Left Arm Action**—At the same time the weight shifts back, the left arm moves straight down until the hand almost touches the side of the thigh nearer the net. The arm then smoothly and continuously returns upward in the same path. Combine the weight shift and the action of the left arm.
4. **Union of Three Actions**—Combine the weight shift and the action of the arms. Arms move down together and then up together at the same rate. Arms are at shoulder height and in a straight line at the conclusion of this phase.

Teaching Suggestion. The instructor might use the cue words "down and up" while the group performs this sequence of actions. Coordination of the arms, not speed, is important.

Reaching the Cocked Position

From the arms-in-line position, bend the right elbow and drop the racket down the back into the *backscratching* position. Keep the elbow up. Continue to raise the left arm upward so that the arm points diagonally to the sky. Begin from the starting position and combine the movements of the two arms to the cocked position.

Teaching Suggestion. The instructor might aid the students by using the cue words, "down and up behind the back." Check that students have hyperextended the wrist in the cocked position.

Tossing the Ball

Release the fingers from the ball when the left hand reaches approximately chin level and allow the ball to float into the air. Check to see that the height of the toss is as high as you can reach with your racket extended overhead. Allow the tossed ball to land on the court and check to see that the ball lands approximately 8 to 12 inches in front of the forward foot toward the net.

Teaching Suggestion. For pupils having problems with the height of the toss, the teacher should place them in front of a fence post and ask them to toss the ball to a specified height on the post.

Begin from the starting position and execute the service motion to the cocked position with the ball toss included. Be sure to keep the head up and the left arm pointing to the sky.

Teaching Suggestion. Students should remain in the group formation but continue to practice this portion of the serve independently. Correct coordination and a proper ball toss are essential.

Contacting the Ball and Following Through

(Note: Students no longer need a ball.)

From the cocked position simultaneously push the body weight upward and throw the racket upward and forward to meet the ball. The racket reaches forward in an attempt to follow the flight of the ball. Both arms fall naturally to the left side of the body. The right foot steps directly into court after contact for maintenance of body balance.

Teaching Suggestion. The teacher should isolate the wrist action. This can be done by having the students hold the racket along the outside of the left leg with the back of the racket hand facing forward. Show the students how to hyperextend and then flex the wrist quickly. Explain that the wrist is hyperextended in the cocked position; the wrist quickly extends immediately prior to contact; after contact, the wrist flexes on the follow-through. Students should then repeat the contact and follow-through portion of the stroke. If proper wrist action is being used, the air can be heard passing through the racket strings.

Combining the Parts

Beginning from the starting position, practice the uninterrupted swing but omit the ball toss.

Teaching Suggestion. The students will be aided in their learning if the instructor again demonstrates the coordinated service swing. Students will feel more comfortable if they can go through the service motion with the instructor several times.

When the instructor believes the students are ready, they should be instructed to begin serving into the fence or on the court.

Specifics for the Instructor

The following information will enhance beginning instructor's understanding of the service motion and aid them in the analysis of individual errors.

Body Rotation

No mention of body rotation should be made to the group even though this is a necessary component of the serve. If students take a side to net starting position, correct rotation will occur for most. As the racket starts back, the hips and spine and shoulders will first rotate back; the hips, spine, and shoulders will then rotate forward just ahead of the racket moving up and forward for contact. On occasion a student may have coordination problems because of exaggerated rotation of the back. Excessive rotation should be discouraged until the server becomes more skilled. On the other hand, some students may lock the hips and freeze the shoulders causing insufficient body rotation. Stress shoulder relaxation to these students and tell them the right side of the body should be facing the net on completion of the follow-through. This backdoor method of overcompensation will usually produce the correct amount of body rotation.

Weight Shift

The instructions given to the group in the contact stage were to thrust the body weight upward as the racket moved upward to hit the ball. Although this is not absolutely correct, this idea seems to produce the desired results. In actuality, body weight and body rotation start forward before the player reaches the cocked position. No mention is made of the body weight moving forward because the weight must move in that direction. Stress is placed on moving the weight upward to encourage students to reach and extend for the ball and to prevent the common fault of shifting the weight forward too soon. A player who shifts the weight too early will usually step into the court with the right foot before contacting the ball. The student can learn to delay the weight shift by serving without moving the feet.

Firmness of Grip

In the initial portions of the service, the server needs a relaxed grip to allow for hyperextension of the wrist in the cocked position. As the racket is lifted upward to contact the ball, the grip tightens so that the grip is firm at contact. A firm grip makes it possible to transfer the momentum of the body to the racket and from the racket to the ball.

Angle of Projection

Ball velocity after contact and the height at which the ball is struck determine the angle at which the ball can be projected to clear the net. Of course, by contacting the ball higher and imparting

greater velocity to the ball, one can project the ball at a more downward angle. Because beginners lack sufficient ball velocity, they should project the ball horizontally, not down.¹ Only after students can correctly and consistently hit the ball with ample velocity should they begin to project the serve at a slightly downward angle.

If all else fails and that one student never serves the ball over the net, have that student serve over the fence from outside the court. This is quite an exaggeration and forces a large upward projection of the ball. However, serving success after this is amazing!

¹ John M. Cooper and Ruth B. Glassow, *Kinesiology* (St. Louis: C.V. Mosby Co., 1976), p. 148.

Surfaces and How They Influence Style of Play

SHARON MATHIS

Sharon Mathis received her B.S. and M.S. degrees from Central Missouri State University in Warrensburg, Missouri. She is an active competitor and is currently an assistant professor of physical education and the women's tennis coach at Benedictine College in Atchison, Kansas.

Most of us do not belong to that "pro" category of tennis players who are so accomplished that they can easily adjust and win on any type of playing surface. However, with background knowledge and a little extra concentration, the varied surfaces should not present too great an adjustment problem.

There is no doubt that the surface does make a difference in the play. A new court may throw off one's timing and footwork. Extra time should always be allotted for practice and for getting adjusted to the bounce of the ball and the speed of play.

Probably, a player will compete on at least two or three different surfaces a year. These surfaces may be grass, clay, cushioned courts, hard courts or indoor synthetics. Although most play will take place on some type of concrete or asphalt surface or indoor courts, the playing characteristics on each of the above surfaces will be explored.

When tennis first came to the United States, it was played exclusively on grass. As the game increased in popularity and gradually moved from the East Coast westward, other types of courts began to be developed—essentially, it is believed, as a means of reducing the cost and time involved in proper maintenance. There are very few grass courts left in this country; some may still be found in country clubs and private estates of the East.

Basically, the style of play on grass will favor an aggressive game—a strong serve and a good net game. Usually, the bounce is uneven, fast and very low. Drop shots can be effective at times on grass since a player may have difficulty starting or stopping quickly because of footing problems. The individual's footing, as well as the ball bounce, may be affected by the grass court conditions. Those conditions are dependent on the dampness of the grass and the court's care and maintenance.

Clay courts, which have succeeded many grass courts, also require considerable maintenance, so they are generally found only at private courts or country clubs. The clay court plays very slowly, as the ball bites into the gritty surface, slows down and waits to be hit.

With top players the clay court produces long rallies because out-right winners are difficult to obtain. Since the ball takes a slower bounce, hard serves and volleys lose part of their effectiveness. The surface blunts the speed of the serve and the high bounce gives adequate retrieving time for the opponent. So, most players stay back on these surfaces, trading ground strokes from the baseline and waiting for the opponent to make errors. Usually, the best players on clay try to outsteady their opponents. To play well, one needs an all-court game, a game which consists of solid ground strokes and deep serves, preferably with spin. Often, drop shots, chop shots, topspin shots and slice or twist serves are very effective because the spin takes hold so well.

Cushioned courts are constructed with an extra layer of resilient material on top of a concrete or asphalt base. These are expensive to install, but are durable and of low maintenance. Since they are expensive, they usually are found at affluent private clubs or indoor tennis facilities. On a cushioned court, the speed of the play is slow because of the resiliency of the surface. The style of play will be quite similar to that used on clay. Rallies tend to be long and the advantage of the powerful serve and volley game is reduced.

Hard courts of concrete or asphalt are the ones to which most players have access. These are ideal for public and school use, since they demand little maintenance. The concrete surface may be rough or slick. The rough surface creates friction and results in a slower game. The slicker surface plays fast and usually has a higher ball bounce. The recommended style of play for the fast concrete surface was popularized long ago by Jack Kramer—a hard serve, followed by a quick put-away volley. If a player changes from clay to hard courts, reflexes must be sharpened. A little faster swing of the racket is required to catch the faster moving ball. Shortening the backswing may also aid in better timing.

If a player elects to stay in the back court instead of utilizing the serve and volley game, it is essential to keep the ground strokes deep, so that the opponent does not get the short ball and an opportunity to approach the net.

Indoor surfaces have been developed and popularized in recent years—mostly, textile or plastic carpets. The textile carpets, such as Boltex or Sport-Eze, are synthetic fibers and quite slow because of the resilience of the fibers. So, an all-court, clay-style game is best. The plastic carpets, such as Uni-Turf and Supreme Court offer a wider choice of playing speeds. Some are quite slow and others are very fast. However, all of the plastic carpets have a consistent bounce and give excellent traction. With this traction, the clay-court player will have difficulty moving unless the feet are really picked up.

A less common group of indoor surfaces are plastic decks and ar-

tificial turfs. Their playing characteristics vary greatly, ranging from clay-like slowness to the speed of grass.

The speed of the playing surface is of considerable concern to the competitive tennis player, since the surface affects the style of play. Basically, the serve and volley game goes well with the fast surface, while steady ground strokes, drop shots, chop shots and spins work well on the slower surfaces. The ability to read the surfaces and to make the necessary skill adjustments could provide the tennis competitor with that "winning edge" essential for success.

Psychological Aspects of Coaching Tennis

CHARLOTTE E. PETERSON

Charlotte Peterson received her B.S. and M.Ed. degrees from Memphis State University. She is an instructor in the Department of Health, Physical Education, and Recreation and the coach of the women's varsity tennis team at Memphis State. She played on the tennis team at Memphis State University and has held a state and regional ranking in doubles.

"If a group of people are subjected to the same practice conditions, influenced by the personality of the same coach, and encouraged to persist in their efforts by the same kinds of motivating conditions, their final performance will differ widely."¹

Each person on a team is an individual—an individual because of background, physical makeup and psychological aspects such as arousal levels, aspiration levels, reaction to stress and pressure etc.² Each one of these aspects contributes to the total person, and as a coach works with the athletes, it is necessary to become aware of how these athletes function as individuals.

Amateur psychology is an integral part of the coaching profession. By knowing the emotional status of an athlete, the coach can better predict and react to certain situations which may affect the performance of the athlete. The behavior of the athlete can best be controlled when the coach understands the different psychological approaches available for coaching individual members of the team.

A coach is constantly observing the differences of each athlete in each one's performance abilities. The coach is aware of the strengths and weaknesses of each individual. However, to have a successful team, this is not enough. The coach must be able to recognize when the athlete's attitude and behavior have changed and what caused the change. For example, the athlete may suddenly lack the self-confidence normally displayed.

"The simple fact that tennis coaches often deal with smaller groups of athletes is an important advantage in allowing for individual differences."³ From this standpoint, the coach has a better op-

¹ Bryant J. Cratty, *Psychological and Physical Activity* (Englewood Cliffs, NJ: Prentice-Hall, 1968), p. 115.

² Joe Walsh, Psychology of tennis coaching, *The Athletic Journal* 52: 54, Oct. 1974.

³ Walsh, Psychology of tennis coaching, p. 54.

portunity to assess the personalities of all athletes on the team, not simply the personalities of the starters or first string players.

Motivation

When one speaks of individual differences, motivation is certainly a very important psychological aspect to consider. "The urge to push toward a specific goal has been termed motivation."⁴ Basically, a team's goal is to play the best possible and have a winning season. However, since the team is made up of individuals, each one has a personal goal, immediate or long-range, which may be totally different from any goal of the other team members.

A coach may want to employ some type of player profile sheet as a guide in choosing the proper motivational technique for each team member. It is extremely important for the coach to understand the motivational forces guiding the athlete's participation in the sport.

An athlete may be motivated from an internal or external source. If it is an internal origin, the athlete is intrinsically motivated. An intrinsically motivated athlete performs in the sport for a personal satisfaction, enjoyment of the sport, desire for beneficial physical activity, or for some other self-satisfying reason.

Motivation by an external source would exemplify an extrinsically motivated athlete. This person performs in an activity or sport for tangible rewards, recognition and praise by peers, boyfriends, girlfriends, parents and other people concerned with the athlete, and many other material attractions. The extrinsically motivated athlete generally has little concern for team success and this individual's goals are primarily conceived for personal gain.

These are some of the differences the coach must be aware of when planning motivational techniques. Even though the coach would rather have all athletes intrinsically motivated, the extrinsically motivated athlete must also be coached. "If motivation from within is the primary source of the athlete's endeavors, he will be more likely to continue participating after the days of fanfare, hero worship and excitement are over."⁵ Furthermore, an intrinsically motivated athlete will generally practice harder, be a student of the sport and probably be more successful in the final analysis.

Level of Aspiration

Level of aspiration is another significant psychological aspect to consider as a coach. One definition for level of aspiration refers to "a person's feelings or how he will be greatly influenced by prior

⁴Robert N. Singer, *Motor Learning and Human Performance* (New York: Macmillan, 1968), p. 173.

⁵Singer, *Motor Learning and Human Performance*, p. 178.

successes or failures in similar situations."⁶ Another definition refers to "a standard by which a person judges his own performance as a success or failure,"⁷ and finally, level of aspiration has been defined simply as "a setting of a goal."⁸

The role of the coach is very emphatically to help each member of the team set realistic goals, those which can be achieved. In setting goals, the athlete must have an understanding of the purpose and direction of each specific goal. The coach must be able to explain the reason for guiding the athlete toward a certain goal, and only through observation of each individual can the coach find the proper goal for each athlete.

Often tennis players set goals which are unattainable. These players believe they can play in one of the top three positions, when in reality, playing a lower position may be very difficult to achieve. Players of this type may do well against the better members of their team but, in competition, they are unsuccessful against players in the lower positions. In this case, the coach should help the players understand that they cannot play a higher position until they learn how to handle pressure in competition. Later in the season the athletes can try for higher positions.

As stated earlier, immediate and long-range goals should be set. A player needs to experience success in early endeavors, so the level of aspiration will be raised to achieve long-range goals. "If the level of aspiration is high enough, it acts as an incentive, something for which to strive."⁹ Therefore, from the coaching standpoint, the athlete should be guided toward an achievable goal and encouraged to strive for better as success is attained. The athlete continues to work harder on the total game, adding to the overall success of the team.

Anxiety and Stress

The concept of anxiety and stress is another area which is different for each individual. If the anxiety and stress level, also called arousal level, is not high enough the athlete's performance may be well below the normal rate of performance. Usually the best performance is seen when the arousal level is neither too high nor too low. The medium level of stress and anxiety appears to be the best condition under which most tennis players perform, while athletes

⁶Robert N. Singer, *Physical Education: An Interdisciplinary Approach* (New York: Macmillan, 1972), p. 121.

⁷M. Ray Loree, *Psychology of Education* (New York: Ronald Press Co., 1970), p. 260.

⁸Bernice E. Waggoner, Motivation in physical education and recreation for emotionally handicapped children, *Journal of Health, Physical Education, Recreation* 44: 74, 1973.

⁹Singer, *Motor Learning and Human Performance*, p. 119.

in other sports may perform best at a lower or higher arousal level because of their psychological structure.

Because these levels are different for each individual, the coach must be aware of how the members of the team differ. Some team members may have to be "psyched up" more than others before a match, while others may have to be calmed down. By knowing each athlete personally, the coach can evaluate the situation, determine the best conditions for the athlete, and take necessary actions to meet the needs of the player for a successful experience.

There are many other areas which should be considered by the coach when studying the members of the team. Motivation, level of aspiration, and arousal level are some of the important ones, but the importance could change with each team or each individual.

"Individual relationships between the coach and athlete have an important effect on personal achievements of the athlete and on the overall level of the team. . . . There is no doubt that it is easier to deal with groups and to train people collectively than to address oneself to individual problems, but the psychological literature on the nature of individual differences strongly suggests individual considerations in individual or group efforts."¹⁰

Trying to know each athlete as an individual and trying to prepare each player before a performance on an individual basis both in the psychological and physical aspects of the game may seem too idealistic and impossible in most situations for most coaches. However, the importance of this method of coaching is made clear by Arnold Beisser. In his book, *The Madness in Sports*, Beisser states: "The capacity of the human animal to perform in any sport's event is obviously limited by his physical structure. But beyond these broad limits, psychological factors play the decisive role."¹¹

Reference

- Pucci, Tom. Coaching the advanced tennis player. *Scholastic Coach* 43: 70, March 1974.

¹⁰ Robert N. Singer, *Coaching, Athletics and Psychology* (New York: McGraw-Hill, 1972), p. 357.

¹¹ Arnold R. Beisser, *The Madness in Sports* (New York: Appleton-Century-Crofts, 1967), p. 153.

Videotaping — for Teaching and Coaching Tennis

ANN E. McCONNELL

Ann McConnell received her B.S. degree from Kent State University, Kent, Ohio, and her M.S.P.E. degree from the University of North Carolina at Greensboro. Her tennis experiences include competing, instructing, directing private tennis camps and coaching at the secondary and collegiate levels. She is an instructor of physical education and tennis coach at Agnes Scott College, Decatur, Georgia and serves as president of the Georgia Association for Intercollegiate Athletics for Women.

Reach more for the ball! Transfer your weight toward the net as you contact the ball! Watch the ball until it hits your strings! Toss the ball higher on your serve!

We are guilty of saying such things to our students in the hope that they hear what we are saying, think about our statement and transfer that verbal knowledge to their nervous system which will, in turn, program their muscles to respond accordingly. It is the author's contention that generally students have not been given early training in kinesthetic awareness and, therefore, are unsuccessful at transferring verbiage into correct tennis technique.

However, if students are able to see themselves perform the skill, compare what they see themselves doing with what they have seen as proper technique, then the transference of visual input becomes more valuable than the verbal input. They are able to see how their bodies are forced to compensate when they contact a ball from too close a distance. They are able to see why they have no control over a ball that is hit with a hyperextended wrist.

It is not my purpose to dwell on specific techniques particular to tennis. It is hoped, however, that the reader will realize that videotaping can be of tremendous value for the enhancement of each aspect of skill involved in the game.

Videotaping is valuable for beginning, intermediate and advanced players. Every physical aspect of the game can be effectively videotaped: each of the skills specific to the sport, strategies of the singles and doubles games, interaction between doubles partners, and the actual playing of a game or set.

The secret of valuable videotaping lies in the instructor's ability to familiarize herself or himself with the equipment to be used and to conduct the filming with utmost efficiency.

Guidelines for Videotaping

1. Prepare the students psychologically for the taping session.

Many people have never performed in front of a camera and will automatically become quite tense during the initial taping session. The tenseness will diminish as the student becomes involved in the specific skill being filmed.

2. Film in a realistic setting.

The filming of tennis skills should always be carried out on the tennis court with the skills being performed as they would in a game situation.

3. Film as efficiently as possible.

A tremendous amount of class time can be saved if you efficiently plan your filming sessions. Explain the procedure to the entire class at the beginning of the session.

A most workable procedure is to use one court for filming and allow the students to practice on the remaining courts. Call on two students at one time so that you will always have a person waiting to be filmed. At the conclusion of each individual's session the student picks up all loose balls on the court and returns them to an appropriately placed basket.

This procedure provides for continuous physical activity, an easy transition from one student to the next, and a constant supply of balls.

4. Play back the tape for analysis at the next class meeting or the next tennis practice.
5. Have a positive approach to the analysis.

The analysis should be based on constructive criticism. Commend the performer for proper technique when appropriate and suggest means for correcting improper technique.

Student Analysis

Involve the entire class in the analysis. Students will discover that certain errors are common within the class and that they are not alone in their struggle to improve their level of skill. It is also possible that a student may be more adept at spotting errors than the instructor.

To help in your evaluation of each student's progress throughout the course, you can videotape specific skills early in the course, midway through the course, and near the end of the course. Both you and your students will be able to make a valid evaluation of the progress that has been made and you may find that your students are motivated in a way you have never experienced.

Team Analysis

A marvelous cohesiveness can develop when your entire tennis team sits down to analyze the play of each individual member. A sense of caring, sharing and reinforcement will occur quite naturally if the analysis is approached positively. Self-confidence and confidence between doubles partners are two valuable aspects of competitive tennis that can result from videotaping. As people see themselves improve on film they automatically feel better about themselves and strive ever more earnestly to achieve higher goals.

Efficient and sensitive videotaping can add the much needed motivational factor to many tennis classes and tennis teams in our high schools and colleges. That motivational factor is bringing students and student athletes in closer touch with themselves.

Van der Meer Warm-up Drill

BONNIE SLATTON

Bonnie Slatton, assistant professor of physical education at the University of Iowa, Iowa City received her B.S. degree from Middle Tennessee State College, Murfreesboro, M.S. from the University of North Carolina at Greensboro and Ph.D. from the University of Iowa. She has taught and coached tennis at high school and college levels and conducted numerous workshops and clinics. She has also completed a 10-day tennis teachers' course with Dennis Van der Meer.

With the possible exception of golf, tennis is the most written about sport in the world. Books range from the how-to, cookbook variety to the psychological inner-game approaches, with each author presenting his or her key to success. In most instances, however, the analyses and suggestions are highly personalized and stylistic. In other words, they represent what Van der Meer refers to as "personality strokes." Van der Meer has taken away the flair and concentrated on the basic core of each stroke, providing a solid foundation upon which each individual can build a personal style of play.

The key phrase is *keep it simple*. Paralysis by analysis is often the outcome of much instruction. If we focus on the start and finish of each stroke, it soon becomes apparent that the actual stroke is amazingly simple. Proper execution of basic strokes is best learned if practice is controlled. Van der Meer has developed a 10-minute warm-up drill which develops control for players at all levels of ability. Because the warm-up focuses on proper execution of each stroke and control it is excellent for beginning to advanced students as well as comparative players. Since the drill utilizes five strokes, the following brief analysis is presented in order to identify key points in each of the strokes.

Forehand

turn — shoulders turned toward racket side

racket back — forearm parallel to court surface, elbow close to side, racket head above wrist

step — weight transferred to non-racket side foot

finish — racket on edge, just past eye level, thumb of racket hand directly in front of non-racket side eye.

Backhand

turn — shoulders and hips turned toward non-racket side

racket back — thumb of racket hand on hip; racket head slightly down

step – weight transferred to racket side foot

hit – ball contacted slightly above knee

finish – racket on edge just past eye level pointing skyward, thumb of racket hand directly in front of racket side eye.

Key Points of Difference

grip – forehand, handshake; backhand, with racket head pointing toward non-racket side, grip racket with thumb facing body

turn – forehand, primarily shoulder turn, with slight hip turn; backhand, shoulder and hip turn

finish – forehand, hips and shoulders rotate so that belt buckle faces net; backhand, hips and shoulders still slightly sideways.

KEY CONCEPTS: No body transfer *when* you hit the ball. All done *before* contact. Power comes from hip and shoulder rotation. Racket *below* ball, finish *high*.

Volley

waiting position – facing net, knees bent, body low and “sitting” so that eyes are fairly close to net, body ready to spring. Weight evenly distributed and forward

racket position – held in front of body at an upward angle, racket butt points toward non-racket side foot (FH), racket side foot (BH) at contact

no backswing – ball hit in front of body on racket side (FH), non-racket side (BH) with a punching or jabbing motion which stops shortly after contact.

no follow-through – keep a firm wrist.

Overhead Smash

grip – should resemble forehand with slight tendency toward backhand (service grip)

waiting and racket position – same as for volley

turn – racket side foot steps behind other foot (turning body sideways), non-racket side hand reaches toward sky “sighting” the ball, racket behind back on edge, move *under* ball with small adjusting steps and *stop* when ball is directly overhead, reach toward sky, transferring weight onto front foot.

contact – follow through to non-racket side.

After learning each of these strokes with *controlled* practice situations, the following 10-minute warm up or practice drill should be used by players at all levels of ability each time they begin play.

Note: Always start by hitting easy and on a shortened court.

MINUTE 1: *Forehand volley* – partner hits controlled fore-

hand and backhand ground strokes to your volley "target." Do not hit hard, object is to keep ball in play.

MINUTE Switch - you now hit ground strokes and partner hits forehand volleys.

MINUTE Backhand volley - partner hits ground strokes to backhand volley "target."

MINUTE 4: Switch

MINUTE 5: Alternate forehand/backhand volleys - partner hits shots so that you can alternately play predictable forehand and backhand volleys. Partner should say, "forehand-backhand." Target should be ready before ball gets there.

MINUTE 6: Switch

MINUTE 7: Overhead smash - partner lobs* and you practice easy and controlled smashes. At first, stop at point of contact, adding slow motion follow-through after a few hits.

MINUTE 8: Switch

MINUTE 9: Forehand volley, backhand volley, overhead - predictable volleys and overheads. Partner should say, "forehand volley-backhand volley-overhead" as she or he hits ball to you.

MINUTE 10: Switch

Note: The ball is *always* introduced by the ground stroker, initially as well as after an error has occurred. The ground stroker should always say what is being introduced after an error has occurred so that the volleyer will know what to get ready for. The ground stroker should always have spare balls on hand in order not to break the rhythm in case the ball goes into the net or cannot be returned.

The writer wishes to thank Dennis Van der Meer for permission to present materials from the Tennis University. Although many of the ideas and drills presented at Tennis University have not been published, Van der Meer has published one work which contains the essence of his approach: Van der Meer, Dennis and Olderman, Murray. *Tennis Clinic*. New York: Hawthorn Books, 1974.

*Lob executed by tilting racket face upward, stroke same as forehand.

The Left-Handed Opponent

KATHLEEN A. CORDES
JANE P. LAMMERS

Kathleen A. Cordes received her B.S. degree from Indiana University, Bloomington, where she played on the tennis team for three years. Her M.A. degree was earned at Ball State University, Muncie, Indiana. She has taught at Ramey Tennis School and was associate head professional at Fern Valley Tennis Club, Louisville, Kentucky. She coaches tennis at the University of Notre Dame, Notre Dame, Indiana and is chairperson of the Indiana Women's Intercollegiate Sports Organization Tennis Advisory Board.

Jane Lammers received her B.A. degree from the University of Notre Dame, Notre Dame, Indiana, where she played on the tennis team for four years. She is an excellent competitor, has taught at Frank Brennan Tennis Academy and tennis clubs.

Ordinary strategies of tennis are challenged by the left-handed opponent. Established tactics must be modified; new tactics must be introduced.

In competition the left-handers' notable advantage is that they are accustomed to the right-handers' game. The opponent's strategy is not designed for the left-hander; therefore, intense concentration is required on adapting old tactics and utilizing new ones. The right-hander must exploit the left-handed player's weaknesses, while the right-hander's own strengths must become competent habits performed automatically. Many strategic actions must be reversed and knowledge of the left-handed player's game formulated.

The left-hander tends to develop a stronger forehand and a weaker backhand. The forehand is usually stronger since right-handers often forget who they are playing. Intending to pummel the backhand, the right-hander unwittingly delights the opponent by hitting to the favored side. As a result, the backhand is underdeveloped, particularly weak, and typically sliced. Women are especially inclined to undercut.¹

The left-hander's advantage is an ingrained awareness of the right-hander's backhand; a maintenance of this same awareness by the right-hander can neutralize this advantage. This awareness makes a

¹ Rod Laver and Jack Pollard, *How To Play Championship Tennis* (New York: Macmillan Co., 1972), p. 41.

more exciting game. A constant battle to assume the dominant forehand in the imbalanced crosscourt exchange requires frequent down-the-line shots.

The most difficult shot seems to be the return of service. The left-hander's unfamiliar spin produces a devastating slice to the advantage court. This draws the player off the court for a weak backhand return. To help alleviate the lack of reach caused by crossing over the body on this return, the receiver should stand nearer to the sideline. This serve should be returned with a short and low crosscourt or, even better, down-the-line to the left-hander's backhand. Beware of the occasional flat serve or the slice to middle corner. Both are used by the left-hander as surprise tactics.

A serve to the deuce court is not as devastating, therefore, major efforts to make points should be made. To avoid the cramping curve for the forehand, one should stand closer to the center of the court and return the ball "on the rise" to the opponent's backhand. Another reason to stand more toward the center of the court is the possibility of a slice serve to the middle corner. Although the ball will be returned with the backhand, the stroke is uncramped for an easier return.

Whenever returning to serve with the forehand, the ball should be aimed toward the center of the court. The left-hander's spin on the ball will cause the return to pull to the backhand side.

Many left-handers do not utilize the slice. If they learned to serve from the right-hand court (a disadvantage) rather than the left-hand court, they may be inclined to pull the serve to the off-side or to the right-hander's forehand. Thus, they have lost the most devastating shot.

The right-hander's slice can be just as deadly to the left-hander. While the left-hander has become somewhat adjusted to the right-hander's slice, the same weaknesses in return can be exploited. A severe slice to the left-hander's backhand can be delivered in the deuce court by moving farther right of the center line. In order to deliver an effective serve to the backhand in the advantage court, move nearer to the center line.

The left-hander tends to become a specialist in forehand service returns. Again, this is due to opponents playing the grooved side of the court—the forehand side. Left-handers are usually placed in the left court when playing doubles; with a right-handed partner the left-hander can then return serves with the forehand.

If possible, the left-hander avoids the backhand return. The grip is frequently behind the racquet requiring a large transfer when there is a quick serve to the backhand. An inadequate transfer will be compensated for by raising the elbow, therefore, hitting inside the ball. This prevents a solid return.

Whenever left-handers approach the net, the ball should be placed to their backhand side. Weak shots will result, giving the opponent the opportunity to approach and volley. A more successful approach is made possible by hitting to the backhand.

The left-hander at the net requires anticipation of unpredictable volleys. In general, the forehand volley is deep and crosscourt; the backhand volley is straight and shallow. The overhead, a carry-over from the serve, is likely to be pulled to the off-side or the forehand.

The advantage of the left-hander is that she or he can rely upon familiar reflexes. Right-handers and left-handers who are accustomed to playing right-handers must maintain unbroken concentration in placing the ball strategically to the left-handed player. This will require placement to the right side of the court provided the backhand has proved to be weaker (the two-handed backhand is usually not weaker).

Playing the left-hander requires intensified concentration, modification of established tactics, and introduction of new tactics, leading to an exciting and challenging duel.

Power and Control in a Tennis Skills Test

LARK BIRDSONG

Lark Birdsong received her B.A. degree from the University of Northern Colorado, Greeley, where she played on the tennis team. Her M.Ed. was earned at the University of North Carolina, Greensboro. She has coached tennis at the University of Northern Colorado's Laboratory High School, taught private tennis lessons, conducted workshops on the coaching of tennis, and has played in tournaments in various regions of the country since graduating from college.

Tennis is a combination of power and control. However, many skills are designed to test only one aspect of the game. The talent-n-timing tennis test is designed to examine both control and power in tennis strokes. Peter Schwed¹ presents a discussion of the original test. The following are adaptations the author made for an intermediate level of tennis. Intermediate is defined as the ability to rally deep, eight times consecutively and place the serve in either corner of both service boxes.

The individual administering the test stands in the middle of the court and halfway between the net and the service line with a minimum of 10 balls. On the tester's side of the court, two ropes are parallel to the side lines and each rope is 100" from the singles side lines. Another rope is placed parallel and 4' back from the original baseline. These are the control lines.

The power line is placed parallel to the end of the court so that the middle is 15' from the baseline. The ends are then pulled in toward the net so that they are 13' from the baseline. Figure 1 shows the court layout.

The player is allowed two practice balls before beginning the test. Once the test begins, the individual can let any number of balls go by that are not suitable. The player starts behind the baseline at mid-point, but can cross over the baseline when stroking the ball.

Scoring is as follows:

The first bounce lands in the control area—two

The first bounce lands in the playing but not the control area—one

The second bounce lands beyond the power line—two

The second bounce lands in between the original baseline and power line—one

¹ Peter Schwed, How do you rate as a player? *Tennis* 10, no. 4: Aug. 1974, 24-29.

All other hits are scored zero. If a zero is scored for control, power is automatically scored zero. Lines receive the higher point value.

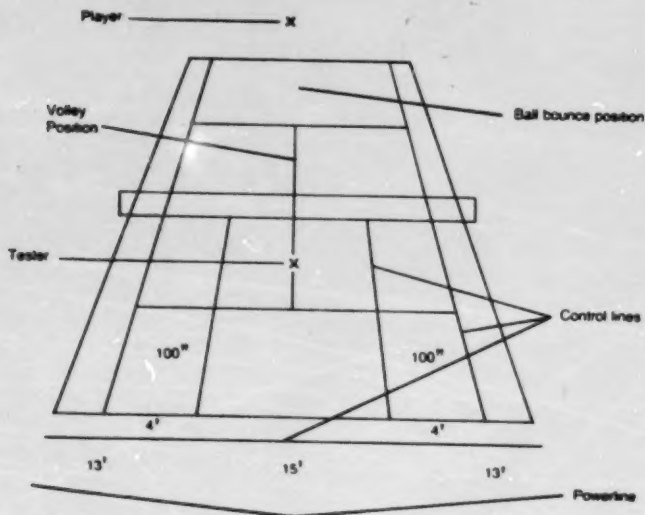


Figure 1. Court layout.

The test begins with the tester drop-hitting to the player. The test is divided into 12 different shots.

1. The tester drop-hits to the player who strokes seven balls fore-hand crosscourt. If the person is right-handed and the ball lands between the singles side line and the control line, two is scored for control. If the ball lands in the playing area one is scored for control. All other balls are scored zero (see Figure 2). If the second bounce lands beyond the power line, two is scored for power. If it bounces between the original baseline and the power line, one is scored for power. All other bounces are scored zero (see Figure 3).

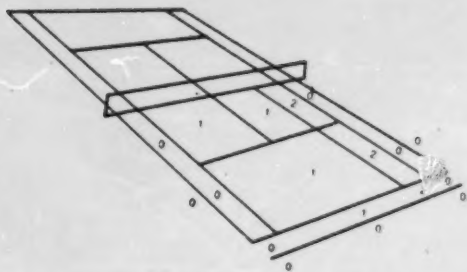


Figure 2. Control: If a crosscourt forehand is being tested and the ball lands between the singles sideline and the control line, two is scored. If the ball lands in the playing area, one is scored. All other balls are scored zero.

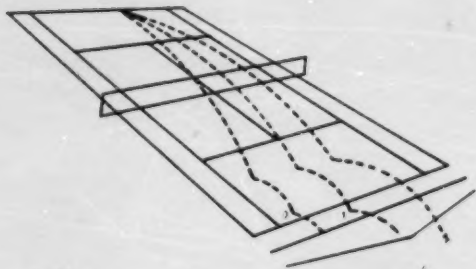


Figure 3. Power: If the second bounce lands beyond the power line, two is scored. If it bounces between the original baseline and the power line, one is scored. All other balls landing before the original baseline on the second bounce are zero.

2. Seven balls are stroked forehand down-the-line.
3. Seven balls are stroked backhand crosscourt.
4. Seven balls are stroked backhand down-the-line.
5. The tester moves back to the service line and drop-hits seven balls volley forehand crosscourt.
6. Seven balls are stroked volley forehand down-the-line.
7. Seven balls are stroked volley backhand crosscourt.
8. Seven balls are stroked volley backhand down-the-line.
9. Five balls are served wide to the deuce court. A double fault is scored zero. One half of the service box is the control area, the other half the playing area. If the ball lands anywhere else, zero is scored. Power is scored as previously measured.
10. Five balls are served tight to the deuce court.
11. Five balls are served wide to the ad court.
12. Five balls are served tight to the deuce court.

With four to a court, the test can be completed in approximately 15 minutes if all is organized. As with all testing, there are certain advantages and disadvantages. The advantages of this test are the number of balls contacted and its testing of power and control. The disadvantage is the length of time for testing in a large class. No doubt there are other advantages and disadvantages. The test also caters to topspin while snubbing the sharp-angle short volleyer.

The use of this test may or may not be feasible in certain settings. However, it is worthy of attention and possibly can be modified to your environment.

Contract Teaching

PHYLLIS A. JACOBSON

Phyllis Jacobson received the B.S.E. and M.S. degrees at Central Missouri State University, Warrensburg, and the P.E.D. at Indiana University, Bloomington. She is currently assistant professor of physical education and women's athletic director at Marian College, Indianapolis, Indiana. She formerly coached tennis at Lindenwood College in St. Charles, Missouri and has taught tennis in summer recreational programs.

The tennis program has, in many instances, consisted of a hit or miss type of approach to teaching the necessary concepts for learning the sport. As teachers of tennis, we have often been remiss in ascertaining whether or not our pupils have really learned what they had hoped for. Perhaps we unconsciously neglected this aspect of our teaching, or maybe we haven't been concerned about pupil input, or maybe we have not examined pupil input for fear of seeing our own failures. For whatever reasons, we could and should be doing more in a positive direction in regard to pupil oriented learning of tennis skills.

In the past, our programs have often consisted of a regimented approach or traditional approach to teaching tennis. The attitude has been one of the teacher determining pupil needs arbitrarily with little regard for individual physiological and psychological differences. Every pupil has learned each skill in the same way. Often such an approach has been teacher oriented rather than pupil oriented. That is, we may teach that which is comfortable for us and not what is always best for our pupils. This traditional approach has left a void where pupil self-motivation should be. How difficult it must be to remain enthusiastic toward learning when one can see little or no progress—and how disappointing, if one entered the tennis program out of a sincere desire to learn the sport. In such programs our goals have often been geared toward the "average" ability pupil and have automatically neglected the poorly and highly skilled players. Small wonder then that we often suffer from lack of teacher, as well as pupil, enthusiasm in our tennis classes.

Is there an alternative to traditional teaching which will improve our effectiveness? One possibility is contract teaching. This alternative allows both the teacher and the pupil a degree of freedom which cannot be a part of traditional teaching methods. The interests, needs and abilities of the individual pupil can be more fully realized in such a method. This student oriented individualization of instruction can lead to a more fulfilling experience and therefore a more lasting desire to participate in tennis. Because the program is geared

toward the individual's abilities, the pupil is not penalized in regard to skill ability. And because the teacher *and* the pupil plan the contract together, there may be a more positive relationship developed, while at the same time establishing realistic but challenging goals.

It must be remembered, however, that regardless of the method adopted, the most important factor in effective teaching and learning is the teacher's enthusiasm. Before any method can be a success, the teacher must motivate the students to want to take part in the activity. Without a high degree of "self-desire" to learn and practice the skills necessary in a sport like tennis, any method will be valueless.¹

In the contract method alternative, while some written work may be of value, most of the time should be spent on activity. The written work should consist of a wide variety of activities from which the pupil may choose, just as in the activity portion of the contract.

A reasonable grace period allowing the pupil to withdraw from the class without penalty may be the most significant factor in accepting the program. Pupils must feel the class is geared to them and, as such, they must feel completely free to change their minds within a reasonable time period if, for some reason, they desire to do so. The length of this period may vary according to school policy, blocks of time per activity, and the amount of actual class time spent on an activity. Regardless of what period of time is selected, the pupil must feel free to withdraw from the class and to reelect to take the class at a later date.

Because of the many decisions which pupils must make in this system, they should be more mature individuals who are able to work independently and accept their own limitations. Without such maturity the pupil probably would be unable to cope with the contract method of teaching.

The following is a proposal for a contract teaching program:

The grades pupils receive are equal to the number of points they have earned. There are 265 points possible. The grades would be broken down so that A= 85-100 percent or a minimum of 225 points, B= 70-84 percent or a minimum of 185 points, C= 55-69 percent or a minimum of 145 points, D= 40-54 percent or a minimum of 106 points, and Incomplete= less than 40 percent.

Forhand Drive Contract

Return 20 consecutive ball machine shots across the net (10 points)

Return 10 consecutive ball machine shots across the net (5 points)

¹ James Collings, Teacher and teaching methods, *The Education Digest*, April 1976, pp. 10-13.

- Rally 50 times consecutively against the wall (20 points)
- Play a match (10 points)
- Write a descriptive analysis of the forehand drive (5 points)
- Make a series of drawings illustrating the forehand drive (5 points)

Backhand Drive Contract

- Return 20 consecutive ball machine shots across the net (10 points)
- Return 10 consecutive ball machine shots across the net (5 points)
- Rally 50 times consecutively against the wall (20 points)
- Play a match (10 points)
- Write a descriptive analysis of the backhand drive (5 points)
- Make a series of drawings illustrating the backhand drive (5 points)

Service Contract

- Successfully serve 20 out of 25 from the right and 20 out of 25 from the left-hand service courts (25 points)
- Serve a match (15 points)
- Audiovisual presentation of varsity team members' serves (5 points)

Volley

- Successfully return 25 net volleys off 30 drive shots (20 points)
- Successfully volley 30 times consecutively against the wall (10 points)
- Report the various uses of the volley (10 points)

Lob

- Successfully lob to designated areas in opponent's back court from own baseline (20 points)
- Successfully return 15 out of 20 lob shots (10 points)
- Successfully return 5 out of 8 lob shots (5 points)
- Describe the uses of the lob shot in a match (5 points)

Written Examination

- A written examination (15 points)

Oral Examination

- An oral examination (15 points)

The emphasis placed on lifetime sports such as tennis may be the greatest challenge to physical education and physical educators in our century. If we are to meet this challenge we must present activities in ways which are challenging and interesting to our pupils. The individualization of an effective contract teaching method may make the difference in meeting this challenge. Contract teaching may be the means of fulfilling our obligation as tennis teachers.

References

- Anderson, Eugene W. New role expectations for contract teaching. *Journal of Health, Physical Education, Recreation*, Oct. 1974.
- Annarino, Anthony A. Another way to teach. *Journal of Health, Physical Education, Recreation*, Oct. 1974.
- Mundy, Jean. Performance based contract teaching. *Journal of Health, Physical Education, Recreation*, Oct. 1974.
- Parchman, Linda L. Experiences with contract teaching. *Journal of Health, Physical Education, Recreation*, Oct. 1974.

Tennis Visual Aids

Revised by MILDRED B. WEST
College of William and Mary
Williamsburg, Virginia

Instructional Films

AAHPER, 1201 16th St., N.W., Washington, DC 20036.

Tennis Group Instruction. 15 min., 64 frames (filmstrip includes guide and script with 33 1/3 record). Color, sound, sale \$11.50.

Applying Forehand and Backhand Strokes. 1976, 20 min., 16mm, sale \$190, super 8 cassette sale \$140.

Forehand and Backhand Fundamentals. 1976, 22.7 min., 16mm, sale \$190, super 8 cassette sale \$140.

The Serve. 20.4 min., 16mm, sale \$190, super 8 cassette sale \$140.

AMF Head Division, Dealer Sales Department, 4801 N. 63rd St., Boulder, CO 80301.

Vic Braden: Go for a Winner. 1976, 37 min., color, sound, sale \$125, rental \$10. Strategy of doubles, particularly mixed doubles.

Champions on Films, 745 State Circle, Ann Arbor, MI 48104.

Tennis. 1976

Part I: Backhand, Forehand and Serve. 16mm, sale \$79, videocassette sale \$57.

Part II: Volleys, Lobs, Smashes and Footwork. 16mm, sale \$79, videocassette sale \$57. Chet Murphy demonstrates.

Chevron U.S.A., Inc., Asphalt Division, 575 Market St., San Francisco, CA 94105.

Van Der Meer Clinic at Forest Hills. 1976, 14 min., color, sound, sale \$100. Discussion and demonstration of errors typical of the club player with suggested corrections.

Churchill Films, 662 North Robertson Blvd., Los Angeles, CA 90069.

Tennis Basics with Dennis Ralston. The forehand, backhand, serve and volley. 8-10 min. each, sound, color, sale \$130 each, rental \$15 each.

Cloud 9 Films, P.O. Box 24818, Minneapolis, MN 55424.

Forehand, Backhand, Volley, Serve, Lob/Overhead. Super 8 color films, sale \$10.95 per film. Jack Roach gives step-by-step action demonstrations.

Coca-Cola Export Co., 515 Madison Ave., N.Y., NY 10022.

Tips for Tennis. 1976, color, sound, free loan. A series of three 11-minute instructional films on the ground strokes, net play, and the serve.

Converse, Marketing Services, 55 Fordham Rd., Wilmington, MA 01887.

Practice with the Pros. 1976, 28 min., color, sound, free loan. Vic Braden gives teaching tips covering ground strokes and specialty strokes.

Eye Gate Media, 146-01 Archer Ave., Jamaica, NY 11435.

Basic Tennis Skills in Action. 1976, 35mm, color, sound, 45 frames (6 min.), captioned, sale \$15.90 complete. Part of the series Games and Activities in Physical Education Curriculum II.

Forest Hills Productions, Box A619, Madison Square Station, N.Y., NY 10010.

Tennis. 1976, 16mm, four parts, 5 min. each, sale \$129.95 for 4 parts or \$39.95 each. Super 8mm, silent, \$10.95 each or \$39.95 per set of four. Super 8mm, sound, \$14.95 each or \$54.95 per set. Videocassettes, $\frac{3}{4}$ ", sound, \$139.95 for the entire 20 minutes. Four-part instructional film covering forehand, backhand, volley and serve. Features USPTA Professional Christofer Busa.

Golden Door Productions, 2748 9th St., Berkeley, CA 94710.

The Winning Serve. 1974, 16mm, color, 15 min., sale \$195.

Features Allie Ritzenberg the outstanding Washington, D.C. pro.

Let's Start with the Forehand. 1974, 16mm, color, 23 min., sale \$270. Allie Ritzenberg divides the instruction into four sections—the forehand, backhand, serve and net game.

MacMillan Films, 34 MacQuesten Parkway South, Mt. Vernon, NY 10550, or Association Films, Inc., 866 Third Ave., N.Y., NY 10023.

Billie Jean King's . . . Tennis for Everyone. 1975, series of 13 10-minute segments, color, sale individual films \$130 each, entire series \$1,500, rental \$12 per film. Films: *The Serve, The Forehand, The Volley, Strategy in Singles Play, Doubles Is a Partnership, Special Shots, Some Good Practice Drills, Do's & Don'ts, Don't Practice Your Mistakes, More on Serves, A Study in Motion, Getting in Shape.*

Modern Talking Picture Service, 2323 New Hyde Park Rd., New Hyde Park, NY 11040.

The Groundstrokes. 1976, 16mm, 22 min., color, sound, free loan.

Production International, Inc., 346 Sunset Dr., Ft. Lauderdale, FL 33301.

The Laver-Emerson Method Tennis Tutor. 1976, four cartridges on reels, 2½ min. each, color, silent, sale \$39.95. *Forehand, Backhand, Volley, and Serve.*

Scope Productions, P.O. Box 5515, Fresno, CA 93755.

Tennis. 8mm, or super 8mm cartridges, color, program 103-0100, sale 7 films \$88. Films: *Forehand Grip and Swing, Backhand Grip*

and Swing, Volley Progression, Service Progression, Footwork-Running Approach, Footwork-Step Away Pattern, Self-Drop.
Seamco, 1567 Forrest Ave., La Grange, GA 30249.

Ken Rosewall. 16mm, color, 26 min., sale \$200, rental \$35.
Sports Films and Talents, Inc., 7625 Bush Lake Rd., Minneapolis, MN 55435.

Playing Better Tennis. 1976, 16mm, color, sound, 25 min., sale \$250, rental \$75. An instructional film developed to familiarize beginners and intermediates with teaching and playing techniques of the top male and female pros.

West Glen Films, 565 Fifth Ave., N.Y., NY 10017.

What You Should Know About Tennis. 1976, 16mm, color, sound, 30 min., free loan. Rod Laver gives helpful hints on warm-up and conditioning, language of tennis, playing different surfaces, and analyzing the opponent's game.

Entertainment Films

Association Films, Inc., 866 Third Ave., N.Y., NY 10022.

Arthur Claims the Gold. 16mm, color, 26½ min., sale \$250, rental \$30. Fifth WCT with Ashe and Borg.

65,000 Miles to Dallas. 1974, 16mm, color, 26½ min., sale \$250, rental \$30. Fourth WCT with Newcombe and Borg.

WCT-The New Era. 16mm, color, 26½ min., sale \$250, rental \$30. Ashe vs. Smith.

The Greatest Tennis Match of All Time. 16mm, color, 26½ min., sale \$250, rental \$30. 2nd World Championship with Laver and Rosewall.

Modern Talking Picture Service, 2323 New Hyde Park Rd., New Hyde Park, NY 11040.

The Kemper International Desert Tennis Classic. 1974, 16mm, color, 25 min., free loan. Features tournament tennis with Rod Laver winning the tournament.

Rolex Watch U.S.A., Rolex Bldg., 665 Fifth Ave., N.Y., NY 10022.

James Mason at Wimbledon. 1976, 16mm, color, 52 min., free loan.

Sports World Cinema, Plaza 23, Suite 203, Box 17022, Salt Lake City, UT 84117.

You're Playing at Wimbledon. 16mm or super 8 videotape, color, 27 min., rental \$25.

U.S. Open-1975. 16mm, color, sound, 24 min., sale \$192, rental \$30. Narrated by Chris Schenkel featuring Orantes' win over Vilas in the semis and Connors in the finals. Also includes Evert and Goolagong doubles match.

Winners All. 16mm, color, sound, 27 min., sale \$175, rental \$25. A visual trip to the AAU Junior Olympics.

U.S. Open-1976. 16mm, color, sound, 30 min., sale \$216, rental \$30. An overview of the 1976 Forest Hills Championships highlighting the major men's and women's matches.

For Further Information, Consult:

AAHPER, Educational Media Services, 1201 16th St., N.W., Washington, DC 20036.

Previous *NAGWS Tennis Guides*, AAHPER, 1201 16th St., N.W., Washington, DC 20036.

USTA Publications, 71 University Pl., Princeton, NJ 08540.

USTA 1977 Tennis Film List. An updated, comprehensive list of tennis films, and a list of USTA Sectional Film Libraries. 47 pages, sale \$1.50.

USTA Regional Libraries. Twenty-three film libraries have been established by the USTA sectional and district tennis associations. The libraries are available to members in the geographic areas served by the respective associations. Consult your section to obtain the list of films and rental fees.

Annotated Tennis Bibliography

Revised by BERNICE GOLDSTEIN

Bayside, New York

Books for Beginners

- Bedingfield, Sherry. *Programmed Tennis*. Dubuque, IA: Kendall/Hunt Publishing Co., 1976. Supplies tennis information, pictures and programmed quizzes.
- Coombs, Charles. *Be a Winner in Tennis*. New York: William Morrow & Co., 1975. Aimed at the junior high school player, the book serves as an introduction to the game.
- Faulkner, Edwin J. and Meymuller, Fred. *Ed Faulkner's Tennis: How To Play It and How to Teach It*. New York: Dial Press, 1970. Excellent for all—teachers, players and coaches—because of sequential photographs on all strokes.
- Gould, Dick. *Tennis Anyone?* 2nd ed. Palo Alto, CA: Mayfield Publishing Co., 1971. Good for players, teachers and coaches. The book describes techniques and common faults. Succinct, complete instructional manual with pictures, diagrams and illustrations.
- Hines, Henry with Carol Morgenstern. *Quick Tennis*. New York: E.P. Dutton, 1977. Stresses the importance of good stride position, correct ready position, and efficient footwork.
- Johnson, Joan and Xanthos, Paul. *Tennis*. Dubuque, IA: William C. Brown, 1972. Good for beginners. Fine attention given to the official and unwritten rules of the game.
- Kraft, Eve. *The Tennis Workbook, Unit I, For Beginning and Advanced Beginner Players*. Englewood Cliffs, NJ: Scholastic Coach Book Series, 1976. Good classroom and court instruction, starting with basic hand-eye coordination exercises.
- Leighton, Harry. *Junior Tennis*. New York: Sterling Publishing Co., 1974. Repetitive system for teaching the beginner.
- Lumiere, Cornell and the Editors of *World Tennis*. *The Book of Tennis—How To Play the Game*. New York, 1976. Casual, humorous approach to the dissemination of tennis fundamentals.
- Metzler, Paul. *Getting Started in Tennis*. New York: Sterling Publishing Co., 1973. An enormous amount of information is clearly presented and restated to be sure that the basics have been absorbed.
- Moore, Ballard J. *Beginning Tennis for the "Love" of Tennis*. Dubuque, IA: Kendall/Hunt Publishing Co., 1975. Tennis text, tests and drills.
- Newcombe, John and Newcombe, Angie. *The Family Tennis Book*. New York: Dell, 1975. Simplified instruction best used as a supplemental text.

- Snyder, Dave. *Tennis*. Chicago: Athletic Institute, 1971. A brief picture book description of the beginnings of a tennis game.
- Willis, DeWitt. *Learn To Play Tennis at Home*. New York: McGraw-Hill, 1976. Rhythmetonics allows for large group instruction within a limited space. Supposedly pupils can copy the photographs and learn tennis before getting onto a court.

Books For Players, Teachers and Coaches

- Barnaby, Jack. *Advantage Tennis: Racket Work, Tactics and Logic*. Boston: Allyn & Bacon, 1975. Very comprehensive look at tennis. Good as advanced text to further understanding of the sport for physical education majors taking a course in tennis.
- Chase, Edward T. *Covering the Court*. Garden City, NY: Doubleday, 1976. Gives factual information needed when one is trying to learn or improve one's court coverage.
- Conroy, John J. and Kraft, Eve F. *The Tennis Workbook Unit II for Intermediate and Advanced Players*. New York: Scholastic Coach Athletic Services, 1976. A useful primer for intermediate level players.
- Haynes, Connie with Eve Kraft and John Conroy. *Speed, Strength and Stamina: Conditioning for Tennis*. Garden City, NY: Doubleday, 1975. The exercises included are well-known, well-described and well-illustrated.
- Kenfield, John C. *Teaching and Coaching Tennis*. Dubuque, IA: William C. Brown, 1976. Instructs the teacher how to teach individuals and group lessons as well as how to coach a tennis team.
- King, Billie Jean and Chapin, Kim. *Tennis To Win*. New York: Harper & Row, 1970. Most applicable for well-coordinated individuals learning to play tennis.
- Kraft, Eve F. and Conroy, John J. *Tennis Teacher's Guide to Group Instruction and Team Coaching*. New York: Scholastic Coach Athletic Services, 1976. A guide for the tennis teacher with emphasis on the details of class organization and supplementary tennis games.
- Lardner, Rex. *Tactics in Women's Singles, Doubles and Mixed Doubles*. Garden City, NY: Doubleday, 1975. Quick, easy reading about simple strategies, including a brief review of strokes via definitions of tennis terms.
- Laver, Rod and Emerson, Roy. *Tennis for the Bloody Few of It*. Chicago: Quadrangle Press, 1976. Written in casual conversational tones of the Aussies. Instructional basics are accompanied by pictures of the right-hander, Emerson, and the lefty, Laver.
- Leighton, Jim. *Inside Tennis: Techniques of Winning*. Englewood Cliffs, NJ: Parker Publishing Co., 1969. Excellent, technical, in-

- depth book that progresses from simple cues and corrections to surface strategies for advanced players.
- Lord, Sterling. *Returning the Serve Intelligently*. Garden City, NY: Doubleday, 1976. Good observations on service spins and how to cope with them.
- Metzler, Paul. *Advanced Tennis*. New York: Sterling Publishing Co., 1972. Good discussion of the fine points of the game with emphasis on analyzing an opponent's game as well as one's own.
- Metzler, Paul. *Tennis Doubles: Tactics and Formations*. New York: Sterling Publishing Co., 1975. A complete analysis of the relative advantages of doubles formations and how to deal with them makes this book an essential for the coach eager to have winning doubles teams.
- Metzler, Paul. *Tennis: Weaknesses and Remedies*. New York: Sterling Publishing Co., 1974. Diagnosis and corrective prescriptions for tennis stroke maladies.
- Murphy, Chet. *Advanced Tennis*. Dubuque, IA: William C. Brown, 1976. Primarily directed at the intermediate level player, the book contains good chapters on singles strategy and play situations.
- Murphy, Chet and Murphy, Bill. *Tennis for the Player, Teacher and Coach*. Philadelphia: W.B. Saunders, 1975. It is exactly as stated in the title, a tennis book for the player, teacher and coach.
- Okker, Tom. *Tennis in Pictures*. New York: Sterling Publishing Co., 1975. A book with sequential pictures of the strokes.
- Schwed, Peter. *The Serve and Overhead Smash*. Garden City, NY: Doubleday, 1976. Dramatically explains how the intermediate player can best execute the big shots.
- Schwed, Peter. *Sinister Tennis*. Garden City, NY: Doubleday, 1975. How to cope with the left-handed tennis player whether as partner or opponent.
- Segura, Pancho. *Pancho Segura's Championship Strategy*. New York: McGraw-Hill, 1976. A complete tennis book that should be read in parts, according to one's own needs.
- Sheehan, Larry. *Mastering Your Tennis Strokes*. New York: Athenaeum, 1976. The top touring men professionals' instruction guide.
- Tennis Strokes and Strategies*. New York: Simon & Schuster, 1975. An anthology in which each stroke is described by several authors in a series of short articles. The book is a good review for the knowledgeable coach and player.
- Tilmanis, Gundars A. *Advanced Tennis for Coaches, Teachers and Players*. Philadelphia: Lea & Febiger, 1975. Written by a physical educator, the book is most valuable when used for coaching and teaching advanced players.

Magazines

Tennis, Magazine of the Racquet Sports. 495 Westport, Norwalk, CT 06856.

Tennis U.S.A. Chilton Way, Radnor, PA 19089.

World Tennis. 383 Madison Avenue, New York, NY 10017.

RULES OF LAWN TENNIS and CASES AND DECISIONS

EXPLANATORY NOTE

The appended Code of Rules, and Cases and Decisions is the Official Code of the International Lawn Tennis Federation, of which the United States Tennis Association is a member. Note that shaded content reflects additional wording from the 1976-78 NAGWS Guide. A check (✓) indicates rewording or clarification.

The Glossary of Terms is added as adopted by the United States Tennis Association and is official in the United States only, although it in no way conflicts with the Code or international practice.

Italicized EXPLANATIONS, EXAMPLES and COMMENTS have been prepared by the USTA *Rules Interpretation Committee* to amplify and facilitate interpretation of the formal code.

THE SINGLES GAME RULE 1

Dimensions and Equipment

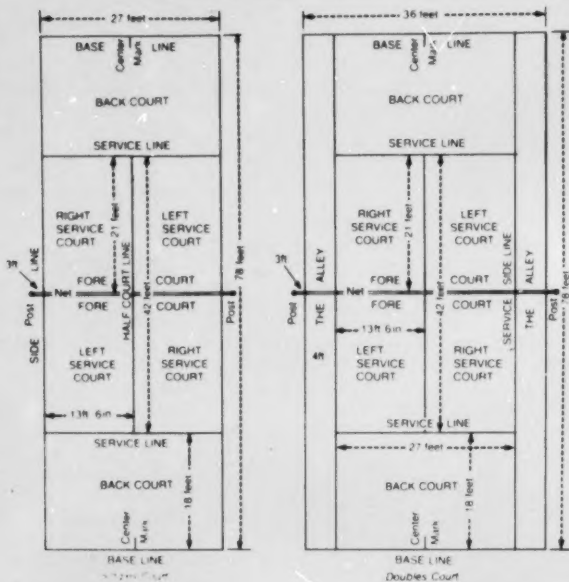
The court shall be a rectangle 78 feet (23.77m) long and 27 feet (8.23m) wide. It shall be divided across the middle by a net suspended from a cord or metal cable of a maximum diameter of one-third of an inch (0.8cm), the ends of which shall be attached to, or pass over, the tops of two posts, 3 feet 6 inches (1.07m) high, and not more than 6 inches (15cm) in diameter, the centers of which shall be 3 feet (0.91m) outside the court on each side. The net shall be extended fully so that it fills completely the space between the two posts and shall be of sufficiently small mesh to prevent the ball's passing through. The height of the net shall be 3 feet (0.914m) at the center, where it shall be held down taut by a strap not more than 2 inches (5cm) wide and white in color. There shall be a band covering the cord or metal cable and the top of the net for not less than 2 inches (5cm) nor more than 2½ inches (6.3cm) in depth on each side and white in color. There shall be no advertisement on the net strap, band or singles sticks. The lines bounding the ends and sides of the Court shall be called respectively the Baselines and the Sidelines. On each side of the net, at a distance of 21 feet (6.40m) from it and parallel with it shall be drawn the Service lines. The space on each side of the net between the service line and the sidelines shall be divided into two equal parts, called the service courts, by the center service line, which must be 2 inches (5cm) in width, drawn half-way between and parallel with, the sidelines. Each baseline shall be bisected by an imaginary continuation of the center service line to a

Rule 1. The Singles Game

line 4 inches (10cm) in length and 2 inches (5cm) in width called the center mark, drawn inside the Court at right angles to and in contact with such baselines. All other lines shall be not less than 1 inch (2.5cm) nor more than 2 inches (5cm) in width, except the baseline, which may be 4 inches (10cm) in width, and all measurements shall be made to the outside of the lines.

Note—In the case of the International Lawn Tennis Championship (Davis Cup) or other Official Championships of the International Federation, there shall be a space behind each baseline of not less than 21 feet (6.4m), and at the sides of not less than 12 feet (3.66m).

DIAGRAM AND DIMENSIONS OF TENNIS COURT



Rule 3. Ball

EXPLANATION OF RULE 1

The center of the posts in doubles should be 3 feet outside the doubles court.

The net should be 33 feet in the clear for a singles court, and 42 feet wide for a doubles court. It should touch the ground along its entire length and come flush to the posts at all points.

It is important to have a stick 3 feet, 6 inches long, with a notch cut in at the 3-foot mark for the purpose of measuring the height of the net at the posts and in the center. These measurements, as well as the measurements of the court itself, always should be made before starting to play an important match.

RULE 2

Permanent Fixtures

The permanent fixtures of the Court shall include not only the net, posts, cord or metal cable, strap and band, but also, where there are any such, the back and side stops, the stands, fixed or movable seats and chairs around the Court, and their occupants, all other fixtures around and above the Court, and the Umpire, Net-cord Judge, Foot-fault Judge, Linesman and Ball Boys when in their respective places.

RULE 3

Ball—Size, Weight and Bound

The ball shall have a uniform outer surface and shall be white or yellow in color. If there are any seams they shall be stitchless. The ball shall be more than two and a half inches (6.35cm) and less than two and five-eighths inches (6.67cm) in diameter, and more than two ounces (56.7 grams) and less than two and one-sixteenth ounces (58.5 grams) in weight. The ball shall have a bound of more than 53 inches (135cm) and less than 58 inches (147cm) when dropped 100 inches (254cm) upon a concrete base. The ball shall have a forward deformation of more than ~~.220~~ of an inch (.56cm) and less than .290 of an inch (.74cm) and a return deformation of more than ~~.350~~ of an inch (.89cm) and less than .425 of an inch (1.08cm) at 18 lbs. (8.165kg) load. The two deformation figures shall be the averages of three individual readings along three axes of the ball and no two individual readings shall differ by more than .030 of an inch (.08cm)

Rule 5. Choice of Ends and Service

in each case. All tests for bound, size and deformation shall be made in accordance with the regulations in the Appendix hereto.

Note. At the Annual General Meeting of the I.L.T.F. held on 12th July, 1967, it was agreed that for the time being non-pressurized balls and low-pressure balls may not be used in the International Tennis Championship (Davis Cup), unless mutually agreed by the two nations taking part in any particular event.

NOTE

"How often may the player have new balls?"

Generally the ball-change pattern is specified by the Referee before the match is started. According to Tournament Regulation the Umpire, subject to the approval of the Referee, may decide when new balls are required to insure fairness of playing conditions. In matches where there is no Umpire, the players should agree beforehand on this matter.

RULE 4

Server and Receiver

The Players shall stand on opposite sides of the net; the player who first delivers the ball shall be called the Server, and the other the Receiver.

Case 1. Does a player, attempting a stroke, lose the point if he crosses an imaginary line in the extension of the net, (a) before striking the ball (b) after striking the ball?

Decision: He does not lose the point in either case by crossing the imaginary line provided he does not enter the lines bounding his opponent's court. (Rule 18 (e.)) In regard to hindrance, his opponent may ask for the decision of the umpire under Rules 19 and 23.

Case 2. The Server claims that the Receiver must stand within the lines bounding his court. Is this necessary?

Decision: No. The Receiver may stand wherever he pleases on his own side of the net.

RULE 5

Choice of Ends and Service

The choice of ends and the right to be Server or Receiver in the first game shall be decided by toss. The player winning the toss may

Rule 7. Foot Fault

choose, or require his opponent to choose:

- (a) The right to be Server or Receiver, in which case the other player shall choose the end; or
- (b) The end, in which case the other player shall choose the right to be Server or Receiver.

RULE 6

Delivery of Service

The service shall be delivered in the following manner. Immediately before commencing to serve, the Server shall stand with both feet at rest behind (i.e. farther from the net than) the base-line, and within the imaginary continuations of the center-mark and side-line. The Server shall then project the ball by hand into the air in any direction and before it hits the ground strike it with his racket, and the delivery shall be deemed to have been completed at the moment of the impact of the racket and the ball. A player with the use of only one arm may utilize his racket for the projection.

Case 1. May the Server in a singles game take his stand behind the portion of the base-line between the sidelines of the singles court and the doubles court?

Decision. No.

Case 2. If a player, when serving, throws up two or more balls instead of one, does he lose that service?

Decision. No. A let should be called, but if the umpire regards the action as deliberate he may take action under Rule 19.

Case 3. May a player serve underhand?

Decision. Yes. There is no restriction regarding the kind of service which may be used; that is, the player may use an underhand or overhand service at his discretion.

RULE 7

Foot Fault

The Server shall throughout the delivery of the service:

- (a) Not change his position by walking or running.
- (b) Not touch, with either foot, any area other than that behind the base-line within the imaginary extension of the center-mark and side-line.

Note.—The following interpretation of Rule 7 was approved by the International Federation on 9th July 1958:—

- (a) The Server shall not, by slight movements of the feet which

Rule 9. Faults

do not materially affect the location originally taken up by him, be deemed "to change his position by walking or running."

(b) The word "foot" means the extremity of the leg below the ankle.

COMMENT: This rule covers the most decisive stroke in the game, and there is no justification for its not being obeyed by players and enforced by officials. No tournament official has the right to request or attempt to instruct linesmen and/or umpires to disregard violations of it.

RULE 8

From Alternate Courts

- (a) In delivering the service, the Server shall stand alternately behind the right and left Courts, beginning from the right in every game. If service from a wrong half of the Court occurs and is undetected, all play resulting from such wrong service or services shall stand, but the inaccuracy of the station shall be corrected immediately after it is discovered.
- (b) The ball served shall pass over the net and hit the ground within the Service Court which is diagonally opposite, or upon any line bounding such Court, before the Receiver returns it.

*COMMENT: The Receiver is **not** allowed to volley a served ball; i.e., she must allow it to strike in his court first. (See Rule 16(a)).*

EXPLANATION: In matches played without umpire or linesmen, it is customary for the Receiver to determine whether the service is good or a fault; indeed, each player makes the calls for all balls hit to his side of the net. (In doubles, the Receiver's partner makes the calls with respect to the service line.)

RULE 9

Faults

The Service is a fault:

- (a) If the Server commits any breach of Rules 6, 7 or 8;
- (b) If he misses the ball in attempting to strike it;
- (c) If the ball served touches a permanent fixture (other than the net, strap or band) before it hits the ground.

Rule 10. Service After a Fault

Case 1. After throwing a ball up preparatory to serving, the Server decides not to strike at it and catches it instead. Is it a fault?

Decision. No.

Case 2. In serving in a singles game played on a doubles court with doubles and singles net posts, the ball hits a singles post and then hits the ground within the lines of the correct service court. Is this a fault or a let?

Decision. In serving it is a fault, because the singles post, the doubles post, and that portion of the net, strap or band between them are permanent fixtures. (Rules 2 and 9, and note to Rule 22.)

EXPLANATION: The significant point governing Case 2 is that the part of the net and band "outside" the singles sticks is not part of the net over which this singles match is being played. Thus such a serve is a fault under the provisions of article (c) above . . . By the same token, this would be a fault also if it were a singles game played with permanent posts in the singles position. (See Case 1 under Rule 22 for difference between "service" and "good return" with respect to a ball's hitting a net post.)

COMMENT: In doubles, if the Server's delivery hits his partner, the serve is a fault (not necessarily loss of point). See Rule 37.

RULE 10

Service After a Fault

After a fault (if it be the first fault) the Server shall serve again from behind the same half of the Court from which he served that fault, unless the service was from the wrong half, when, in accordance with Rule 8, the Server shall be entitled to one service only from behind the other half. A fault may not be claimed after the next service has been delivered.

Case 1. A player serves from a wrong court. He loses the point and then claims it was a fault because of his wrong station.

Decision. The point stands as played and the next service should be from the correct station according to the score.

Case 2. The point score being 15 all, the Server, by mistake, serves from the left-hand court. He wins the point. He then serves again from the right-hand court, delivering a fault. The mistake in

Rule 12. A Let

station is then discovered. Is he entitled to the previous point? From which court should be next serve?

Decision. The previous point stands. The next service should be from the left-hand court, the score being 30/15, and the Server has served one fault.

RULE 11

Receiver Must Be Ready

The Server shall not serve until the Receiver is ready. If the latter attempts to return the service, he shall be deemed ready. If, however, the Receiver signifies that he is not ready, he may not claim a fault because the ball does not hit the ground within the limits fixed for the service.

EXPLANATION OF RULE 11

The Server must wait until the Receiver is ready for the second service as well as the first, and if the Receiver claims to be not ready and does not make any effort to return a service, the Server may not claim the point, even though the service was good.

RULE 12

A Let

Note: A service that touches the net in passing yet falls into the proper court is a let. This word is used also when, because of an interruption while the ball is in play, or for any other reason, a point is to be replayed.

If, in all cases where a let has to be called under the rules, or to provide for an interruption to play, it shall have the following interpretations:

- (a) When called solely in respect of a service, that one service only shall be replayed.
- (b) When called under any other circumstance, the point shall be replayed.

Case 1. A service is interrupted by some cause outside those defined in Rule 13. Should the service only be re-played?

Decision. No, the whole point must be replayed.

EXPLANATION: The phrase "in respect of a service" in (a) means a let because a served ball has touched the net before landing in the proper court, OR because the Receiver was

Rule 14. When Receiver Becomes Server

not ready . . . Case 1 refers to a second serve, and the decision means that if the interruption occurs during delivery of the second service, the Server gets two serves.

EXAMPLE: On a second service a Linesman calls "fault" and immediately corrects it (the Receiver meanwhile having let the ball go by). The Server is entitled to two serves, on this ground: The corrected call means that the Server had put the ball into play with a good service, and once the ball is in play and a let is called, the point must be replayed. . . Note, however, that if the serve were an unmistakable ace — that is, the Umpire was sure the erroneous call had no part in the Receiver's inability to play the ball — the point should be declared for the Server.

Case 2. If a ball in play becomes broken, should a let be called? Decision. Yes.

Note: A ball shall be regarded as having become "broken" if, in the opinion of the Umpire, it is found to have lost compression to the point of being unfit for further play, or unfit for any reason.

RULE 13

The Service Is a Let

The service is a let:

- (a) If the ball served touches the net, strap or band, and is otherwise good, or, after touching the net, strap or band, touches the Receiver or anything which he wears or carries before hitting the ground.
- (b) If a service or a fault be delivered when the Receiver is not ready (see Rule 11).

COMMENT: A "let" called for the reason the Receiver had indicated he is not ready, if called on second service, does not annul a fault on first serve.

RULE 14

When Receiver Becomes Server

At the end of the first game the Receiver shall become the Server, and the Server Receiver; and so on alternately in all the subsequent games of a match. If a player serves out of turn, the player who

Rule 17. Receiver Wins Point

ought to have served shall serve as soon as the mistake is discovered, but all points scored before such discovery shall be reckoned. If a game shall have been completed before such discovery, the order of service remains as altered. A fault served before such discovery shall not be reckoned.

RULE 15

Ball in Play Till Point Decided

A ball is in play from the moment at which it is delivered in service. Unless a fault or a let be called, it remains in play until the point is decided.

COMMENT: A point is not "decided" simply when, or because, a good shot has clearly passed a player, nor when an apparently bad shot passes over a baseline or sideline. An outgoing ball is still definitely "in play" until it actually strikes the ground, racketstop or other fixture. The same applies to a good ball, sounding after it has landed in the proper court. A ball that becomes imbedded in the net is out of play.

Case 1. A ball is played into the net; the player on the other side, thinking that the ball is coming over, strikes at it and hits the net. Who loses the point?

Decision. If the player touched the net while the ball was still in play, he loses the point.

RULE 16

Server Wins Point

The Server wins the point:

- (a) If the ball served, not being a let under Rule 13, touches the Receiver or anything which he wears or carries, before it hits the ground;
- (b) If the receiver otherwise loses the point as provided by Rule 18.

RULE 17

Receiver Wins Point

The Receiver wins the point:

- (a) If the Server serves two consecutive faults;
- (b) If the Server otherwise loses the point as provided by Rule 18

Rule 18. Player Loses Point

RULE 18

Player Loses Point

A player loses the point if:

- (a) He fails, before the ball in play has hit the ground twice consecutively, to return it directly over the net (except as provided in Rule 22(a) or (c)); or
- (b) He returns the ball in play so that it hits ground, a permanent fixture, or other object, outside any of the lines which bound his opponent's Court (except as provided in Rule 22(a) and (c)); or
- (c) He volleys the ball and fails to make a good return even when standing outside the Court; or
- (d) He touches or strikes the ball in play with his racket more than once in making a stroke; or

EXPLANATION: A player may be deemed to have touched the ball more than once if the ball takes an obvious second trajectory as it comes off the racket, or comes off the racket in such a way that the effect is that of a "sling" or "tarrow" rather than that of a "hit." Such strokes are informally referred to as "double hits" or "carriers." Experienced umpires give the player the benefit of the doubt unless they see such a second trajectory or a definite "second push."

- (e) He or his racket (in his hand or otherwise) or anything which he wears or carries touches the net, posts, cord or metal cable, strap or band, or the ground within his opponent's Court at any time while the ball is in play; or
- (f) He volleys the ball before it has passed the net; or
- (g) The ball in play touches him or anything that he wears or carries, except his racket in his hand or hands; or

Note that this loss of point occurs regardless of whether the player is inside or outside the bounds of his court when the ball touches him. A player is considered to be "wearing or carrying" anything that he was wearing or carrying at the beginning of the point during which the touch occurred.

- (h) He throws his racket at and hits the ball.

EXAMPLE: Player has let racket go out of his hand clearly before racket hits ball, but the ball rebounds from his racket into proper court. This is not a good return; player loses point.

Case 1. In delivering a first service which falls outside the proper court, the Server's racket slips out of his hand and flies into the net. Does he lose the point?

Rule 18. Player Loses Point

Decision. If his racket touches the net while the ball is in play, the Server loses the point. (Rule 18 (e).)

Case 2. In serving, the racket flies from the Server's hand and touches the net before the ball has touched the ground. Is this a fault, or does the player lose the point?

Decision. The Server loses the point because his racket touches the net while the ball is in play. (Rule 18 (e).)

Case 3. A and B are playing against C and D. A is serving to D. C touches the net before the ball touches the ground. A fault is then called because the service falls outside the service court. Do C and D lose the point?

Decision. The call "fault" is an erroneous one. C and D have already lost the point before "fault" could be called, because C touched the net while the ball is in play. (Rule 18 (e).)

Case 4. May a player jump over the net into his opponent's court while the ball is in play and not suffer penalty?

Decision. No; he loses the point. (Rule 18 (e).)

Case 5. A cuts the ball just over the net, and it returns to A's side. B, unable to reach the ball, throws his racket and hits the ball. Both racket and ball fall over the net on A's court. A returns the ball outside of B's court. Does B win or lose the point?

Decision. B loses the point. (Rule 18 (e) and (h).)

Case 6. A player standing outside the service court is struck by the service ball before it has touched the ground. Does he win or lose the point?

Decision. The player struck loses the point (Rule 18(g), except as provided under Rule 13 (a).)

EXPLANATION: The exception referred to is that of a served ball that has touched the net en route into the Receiver's court; in that circumstance it is a let service, not loss of point. Such a let does not annul a previous (first service) fault; therefore if it occurs on second service, the Server has one serve coming.

Case 7. A player standing outside the court volleys the ball or catches it in his hand and claims the point because the ball was certainly going out of court.

Decision. In no circumstance can he claim the point;

- (1) If he catches the ball he loses the point under Rule 18 (g).
- (2) If he volleys it and makes a bad return he loses the point under Rule 18 (c).
- (3) If he volleys it and makes a good return, the rally continues.

Rule 21. Ball Touching Permanent Fixture

RULE 19

Player Hinders Opponent

If a player commits any act either deliberate or involuntary which, in the opinion of the Umpire, hinders his opponent in making a stroke, the Umpire shall in that first case award the point to the opponent, and in the second case order the point to be replayed.

Case 1. Is a player liable to a penalty if in making a stroke he touches his opponent?

Decision. No, unless the Umpire deems it necessary to take action under Rule 19.

Case 2. When a ball bounds back over the net, the player concerned may reach over the net in order to play the ball. What is the ruling if the player is hindered from doing this by his opponent?

Decision. In accordance with Rule 19, the Umpire may either award the point to the player hindered, or order the point to be replayed. (See also Rule 23.)

USTA Interpretation: Upon appeal by a competitor that an opponent's action in discarding a "second ball" after a rally has started constitutes a distraction (hindrance), the Umpire, if he deems the claim valid, shall require the opponent to make some other, and satisfactory, disposition of the ball that is not in play on a given point.

RULE 20

Ball Falling on Line—Good

A ball falling on a line is regarded as falling in the Court bounded by that line.

COMMENT: In matches played without officials, it is customary for each player to make the calls on all balls hit to his side of the net.

RULE 21

Ball Touching Permanent Fixture

If the ball in play touches a permanent fixture (other than the net, posts, cord or metal cable, strap or band) after it has hit the ground, the player who struck it wins the point; if before it hits the ground his opponent wins the point.

Case 1. A return hits the Umpire or his chair or stand. The player claims that the ball was going into court.

Decision. He loses the point.

RULE 22

Good Return

It is a good return:

- (a) If the ball touches the net, posts, cord or metal cable, strap or band, provided that it passes over any of them and hits the ground within the Court; or
- (b) If the ball, served or returned, hits the ground within the proper Court and rebounds or is blown back over the net, and player whose turn it is to strike reaches over the net and plays the ball, provided that neither he nor any part of his clothes or racket touch the net, posts, cord or metal cable, strap or band or the ground within his opponent's Court, and that the stroke be otherwise good; or
- (c) If the ball be returned outside the post, either above or below the level of the top of the net, even though it touches the post, provided that it hits the ground within the proper Court; or
- (d) If a player's racket passes over the net after he has returned the ball, **provided the ball passes the net before being played and is properly returned; or**
- (e) If a player succeeded in returning the ball, served or in play, which strikes a ball lying in the Court.

Note.—If, for the sake of convenience, a doubles court is equipped with single posts for the purpose of singles game, then the doubles posts and those portions of the net, cord or metal cable and band outside such singles posts shall be regarded as "permanent fixtures other than net, post, strap or band," and therefore *not* posts or parts of the net of that singles game.

A return that passes under the net cord between the singles and adjacent doubles post without touching either net cord, net or doubles post and falls within the area of play, is a good return. (But in doubles this would be a "through" — loss of point.)

Case 1. A ball going out of court hits a net post and falls within the lines of the opponent's court. Is the stroke good?

Decision. If a service; no, under Rule 9 (c). If other than a service; yes, under Rule 22 (a).

Case 2. Is it a good return if a player returns the ball holding his racket in both hands?

Decision. Yes.

Case 3. The Service, or ball in play, strikes a ball lying in the court. Is the point won or lost thereby?

Rule 23. Interference

Decision. No. Play must continue. If it is not clear to the Umpire that the right ball is returned a let should be called.

Case 4. May a player use more than one racket at any time during play?

Decision. No: the whole implication of the rules is singular.

✓ Case 5. Must a player's request for the removal of a ball or balls lying in the opponent's court be honored?

Decision. Yes.

RULE 23

Interference

In case a player is hindered in making a stroke by anything not within his control except a permanent fixture of the Court, or except as provided for in Rule 19, the point shall be replayed.

Case 1. A spectator gets into the way of a player, who fails to return the ball. May the player then claim a let?

Decision. Yes, if in the Umpire's decision he was obstructed by circumstances beyond his control, but not if due to permanent fixtures of the Court or the arrangements of the ground.

Case 2. A player is interfered with as in Case 1, and the Umpire calls a let. The Server had previously served a fault. Has he the right to two services?

Decision. Yes: as the ball is in play, the point, not merely the stroke, must be replayed as the rule provides.

Case 3. May a player claim a let under Rule 23 because he thought his opponent was being hindered, and consequently did not expect the ball to be returned?

Decision. No.

Case 4. Is a stroke good when a ball in play hits another ball in the air?

Decision. A let should be called unless the other ball is in the air by the act of one of the players, in which case the Umpire will decide under Rule 19.

✓ Case 5. If an Umpire or other judge erroneously calls "fault" or "out" and then corrects himself, which of the calls shall prevail?

Decision. A let must be called, unless, in the opinion of the Umpire, neither player is hindered in his game, in which case the corrected call shall prevail.

Case 6. If the first ball served — a fault rebounds, interfering with the Receiver at the time of the second service, may the Receiver claim a let?

Rule 25. The Set

Decision. Yes. But if he had an opportunity to remove the ball from the court and negligently failed to do so, he may not claim a let.

Case 7. Is it a good stroke if the ball touches a stationary or moving object on the court?

Decision. It is a good stroke unless the stationary object came into court after the ball was put into play in which case a "let" must be called. If the ball in play strikes an object moving along or above the surface of the court a "let" must be called.

Case 8. What is the ruling if the first service is a fault, the second service correct, and it becomes necessary to call a let under the provisions of Rule 23 or if the Umpire is unable to decide the point?

Decision. The fault shall be annulled and the whole point re-played.

COMMENT: See Rule 12 and Explanation thereto.

RULE 24

The Game

If a player wins his first point, the score is called *15* for that player; on winning his second point, the score is called *30* for that player; on winning his third point, the score is called *40* for that player; and the fourth point won by a player is scored *game* for that player except as below:

✓If both players have won three points, the score is called *deuce*; and the next point won by a player is called *advantage* for that player. If the same player wins the next point, he wins the game; if the other player wins the next point the score is again called *deuce*; and so on until a player wins the two points immediately following the score at *deuce*, when the game is scored for that player.

COMMENT: In matches played without an umpire the Server should announce, in a voice audible to his opponent and spectators, the set score at the beginning of each game, and (audible at least to his opponent) point scores as the game goes on. Misunderstandings will be averted if this practice is followed.

RULE 25

The Set

A player (or players) who first wins six games wins a set; except that he must win by a margin of two games over his opponent and

Rule 29. Decisions of Umpire and Referee

where necessary a set shall be extended until this margin be achieved. NOTE: See tiebreaker.

RULE 26

When Players Change Ends

The players shall change ends at the end of the first, third and every subsequent alternative game of each set, and at the end of each set unless the total number of games in such set be even, in which case the change is not made until the end of the first game of the next set.

RULE 27

Maximum Number of Sets

The maximum number of sets in a match shall be 5, or, where women take part, 3.

RULE 28

Rules Apply to Both Sexes

Except where otherwise stated, every reference in these Rules to the masculine includes the feminine gender.

RULE 29

Decisions of Umpire and Referee

✓In matches where a Chair Umpire is appointed, the decision of the Chair Umpire shall be final; but where a Referee is appointed an appeal shall lie to the Referee from the decision of a Chair Umpire on a question of law, and in all such cases the decision of the Referee shall be final.

In matches where assistants to the Chair Umpire are appointed (Line Umpires, Net Umpire, Foot-fault Judge) their decisions shall be final on questions of fact. When such an assistant is unable to give a decision he/she shall indicate this immediately to the Chair Umpire who shall give a decision. When the Chair is unable to give a decision on a question of fact he/she shall order a let to be called.

In Davis Cup and Wightman Cup and Bonne Bell Cup matches only, the decision of an assistant to the Chair Umpire, or the Chair Umpire if the assistant is unable to make a decision, can be changed

Rule 30.

by the Referee, who may also authorize the Chair Umpire to change the decision of an assistant or order a let to be called.

The Referee, in his/her discretion, may at any time postpone a match on account of darkness or the condition of the ground or the weather. In any case of postponement the previous score and previous occupancy of courts shall hold good, unless the Referee and the player unanimously agree otherwise.

RULE 30

Play shall be continuous from the first service till the match be concluded; provided that after the third set or when women take part, the second set, either player is entitled to a rest, which shall not exceed 10 minutes, or in countries situated between Latitude 15 degrees North and Latitude 15 degrees South, 45 minutes, and provided further that when necessitated by circumstances not within the control of the players, the Umpire may suspend play for such a period as he may consider necessary. If play be suspended and be not resumed until a later day the rest may be taken only after the third set (or when women take part in the second set) of play on such later day, completion of an unfinished set being counted as one set. These provisions shall be strictly construed, and play shall never be suspended, delayed or interfered with for the purpose of enabling a player to recover his strength or his wind, or to receive instruction or advice. The Chair Umpire shall be the sole judge of such suspension, delay or interference, and after giving due warning he may disqualify the offender.

(a) Any nation is at liberty to modify the first provision of Rule 30, or omit it from its regulations governing tournaments, matches, or competitions held in its own country, other than the International Lawn Tennis Championships (Davis Cup and Federation Cup).

(b) When changing sides a maximum of one minute shall elapse from the cessation of the previous game to the time players are ready to begin the next game. (This provision became operative in 1968.)

Should a player, on account of physical unfitness or an unavoidable accident, not within his control, be unable to continue play, he must be defaulted.

If an Umpire decides that a player is deliberately stalling to gain time or unfairly disconcert his opponent he should warn the player once, and if the practice continues the Umpire should default him.

Rule 30.

✓USTA Rules Regarding Rest Periods In Age-Limited Categories:

Regular MEN'S and WOMEN'S, and MEN'S 21 and WOMEN'S 21—The first paragraph of Rule 30 applies, except that a tournament using tie-breakers may eliminate rest periods provided advance notice is given.

BOYS' 18—All matches in this division shall be best of three sets with NO REST PERIOD, except that in interscholastic, state, sectional and national championships the FINAL ROUND may be best-of-five. If such a final requires more than three sets to decide it, a rest of 10 minutes after the third set is mandatory. Special Note: In severe temperature-humidity conditions a Referee may rule that a 10-minute rest may be taken in a Boys' 18 best-of-three. However, to be valid this must be done before the match is started, and as a matter of the Referee's independent judgement.

BOYS' 16, 14 and 12, and GIRLS' 18, 16, 14 and 12—All matches in these categories shall be best of three sets. A 10-minute rest before the third set is MANDATORY in Girls' 12, 14 and 16, and in Boys' 12 and 14. The rest period is OPTIONAL in Girls' 18 and Boys' 16. (Optional means at the option of any competitor.)

All SENIOR divisions (35's, 40's, 45's, 50's and up), and Father-and-Son: Under conventional scoring, all matches best-of-three, with rest period optional.

WHEN 'NO-AD' SCORING IS USED IN A TOURNAMENT . . . A tournament committee may stipulate that there will be no rest periods, even in some age divisions where rest periods would be optional under conventional scoring. These divisions are: regular Men's (best-of-five) and Women's . . . Men's 21 (best-of-five) and Women's 21 . . . Men's 35 . . . Seniors (men 45 and over) . . . Father-and-Son.

N.B. Two conditions of this stipulation are: (1) Advance notice must be given on entry blanks for the event, and (2) The Referee is empowered to reinstate the normal rest periods for matches played under unusually severe temperature-humidity conditions; to be valid, such reinstatement must be announced before a given match or series of matches is started, and be a matter of the Referee's independent judgement.

COMMENT: When a player competes in an event designated as for players of a bracket whose rules as to intermissions and length of match are geared to a different physical status, the player cannot ask for allowances based on his or her age, or her sex. For example, a female competing in an inter-collegiate (men's) varsity team match would not be entitled to claim a rest period in a best-of-three-sets match unless that

Rule 30.

were the condition under which the team competition was normally held.

Case 1. A player's clothing, footwear, or equipment becomes out of adjustment in such a way that it is impossible or undesirable for him to play on. May play be suspended while the maladjustment is rectified?

Decision. If this occurs in circumstances not within the control of the player, of which circumstances the Umpire is the sole judge, a suspension may be allowed.

Case 2. If, owing to an accident, a player is unable to continue immediately, is there any limit to the time during which play may be suspended?

Decision. No allowance may be made for natural loss of physical condition. Consideration may be given by the Umpire for accidental loss of physical ability or condition.

COMMENT: Case 2 refers to an important distinction that should be made between a temporary disability caused by an accident during play, and disability caused by fatigue (cramps or muscle pull, for example). Not even momentary "rest" is allowed for recovery from "natural loss of physical condition." Even in case of accident, no more than three minutes should be spent in diagnosis/prognosis, and if bandaging or medication is going to require more than that, the decision as to whether any additional time is to be allowed should be reached by the Chair Umpire, the Referee and, if possible, one other member of the Tournament Committee.

Case 3. During a doubles game, may one of the partners leave the court while the remaining partner keeps the ball in play?

Decision. Yes, so long as the Umpire is satisfied that play is continuous within the meaning of the rules, and that there is no conflict with Rules 33 and 34. (See Case 1 of Rule 33.)

NOTE: When a match is resumed following an interruption necessitated by weather conditions, it is allowable for the players to engage in a "re-warm-up" period. It may be of the same duration as the warm-up allowed at the start of the match; may be done using the balls that were in play at the time of the interruption, and the time for the next ball change shall not be affected by this.

Rule 33. Order of Service

THE DOUBLES GAME

RULE 31

The above Rules shall apply to the Doubles Game except as below.

RULE 32

Dimensions of Court

For the Doubles Game, the Court shall be 36 feet (10.97m) in width, i.e., 4½ feet (1.37m) wider on each side than the Court for the Singles Game, and those portions of the singles side-lines which lie between the two service-lines shall be called the service-side-lines. In other respects, the Court shall be similar to that described in Rule 1, but the portions of the singles side-lines between the base-line and service-line on each side of the net may be omitted if desired.

Case 1. In doubles the Server claims the right to stand at the corner of the court as marked by the doubles side line. Is the foregoing correct or is it necessary that the Server stand within the limits of the center mark and the singles side line?

Decision. The Server has the right to stand anywhere between the center mark and the doubles side lines.

RULE 33

Order of Service

The order of serving shall be decided at the beginning of each set as follows:

The pair who have to serve in the first game of each set shall decide which partner shall do so and the opposing pair shall decide similarly for the second game. The partner of the player who served in the first game shall serve in the third; the partner of the player who served in the second game shall serve in the fourth, and so on in the same order in all the subsequent games of a set.

EXPLANATION: It is not required that the order of service, as between partners, carry over from one set to the next. Each team is allowed to decide which partner shall serve first for it, in each set. This same option applies with respect to the order of receiving service.

Rule 35. Service Out of Turn

Case 1. In doubles, one player does not appear in time to play, and his partner claims to be allowed to play single-handed against the opposing players. May he do so?

Decision. No.

RULE 34

Order of Receiving

The order of receiving the service shall be decided at the beginning of each set as follows:

The pair who have to receive the service in the first game shall decide which partner shall receive the first service, and that partner shall continue to receive the first service in every odd game throughout that set. The opposing pair shall likewise decide which partner shall receive the first service in the second game and that partner shall continue to receive the first service in every even game throughout that set. Partners shall receive the service alternately throughout each game.

EXPLANATION OF RULE 34

The receiving formation of a doubles team may not be changed during a set; only at the start of a new set. Partners must receive throughout each set on the same sides of the court which they originally selected when the set began. The first Server is not required to receive in the right court; he may select either side, but must hold this to the end of the set.

Case 1. Is it allowable in doubles for the Server's partner to stand in a position that obstructs the view of the Receiver?

Decision. Yes. the Server's partner may take any position on his side of the net in or out of the court that he wishes. **(The same is true of the Receiver's partner).**

RULE 35

Service Out of Turn

If a partner serves out of his turn, the partner who ought to have served shall serve as soon as the mistake is discovered, but all points scored, and any faults served before such discovery shall be reckoned. If a game shall have been completed before such discovery the order of service remains as altered.

Rule 38. Ball Struck Alternately

RULE 36

Error in Order of Receiving

If during a game the order of receiving the service is changed by the receivers it shall remain as altered until the end of the game in which the mistake is discovered, but the partners shall resume their original order of receiving in the next game of that set in which they are receivers of the service.

RULE 37

Ball Touching Server's Partner Is Fault

The service is a fault as provided for by Rule 9, or if the ball served touches the Server's partner or anything he wears or carries; but if the ball served touches the partner of the Receiver or anything which he wears or carries, not being a let under Rule 13 (a), before it hits the ground, the Server wins the point.

RULE 38

Ball Struck Alternately

The ball shall be struck alternately by one or other player of the opposing pairs, and if a player touches the ball in play with his racket in contravention of this Rule, his opponents win the point.

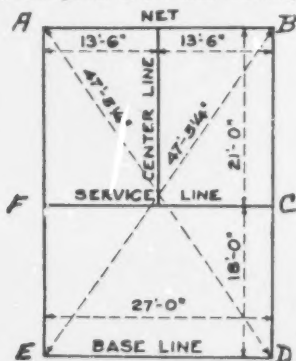
*Should any point arise upon which you find it difficult to give a decision or on which you are in doubt as to the proper ruling, immediately write, giving full details, to John Stahr, U.S.T.A. **Rules Interpretation** Committee, 65 Briar Cliff Rd., Larchmont, N.Y. 10538, and full instructions and explanations will be sent you.*

How to Lay Out a Tennis Court*

Most accurate results are obtained if a tennis court is laid out by a civil engineer or competent surveyor using proper surveying instruments. However, if such services are not readily available, adequate accuracy can be obtained with the proper use of two good 50 foot tapes as indicated below.

All courts should be laid out for singles and doubles play. However, since the same lines—except for the side line extensions for doubles play—are required for each it is best to first lay out the singles court, establishing the lines shown in the diagram on this page. (Note that this sketch shows only one half of such a court, the other half is exactly the same.) Courts should be laid out with the long way north and south. First establish the net or center line. This is done by driving a peg at Point A, then a second peg—27 feet from A—at point B. (See sketch). Then take the two fifty-foot tapes and attach their respective ends to the pegs A and B. On the first which will determine the side line A-E, measure off 39 feet and on the second, which will determine the diagonal B-E, measure off 47 feet 5¼ inches; pull taut in such directions that at these distances they meet at point E. Drive a peg at E. Then establish point D in a similar manner. (Note that the distance from E to D should be 27 feet—the same as from A to B.)

Check this for accuracy before driving peg at D. Point F (21 feet from A) and point C (21 feet from B) should then be established and



pegs driven at these points. This is the lower (or south) one half of the court. The upper (or north) one half is determined in a similar manner. This completes the boundaries for the singles court. The doubles court boundaries are established by prolonging the base lines (from points E & D on lower half and similarly for the upper half.) 4 feet 6 inches in each direction and join-

*This article, the Rules of Lawn Tennis and Cases and Decisions (pages 66-88) and the USTA Tournament Regulations (pages 91-109) are reprinted with the permission of the USTA.

ing the four new points to establish the side lines for the doubles court. (Note that the doubles court is actually 9 feet wider than the singles court with side lines parallel to those on the singles court.)

See diagram accompanying Rule 1 for sketch of doubles court, with location of net posts indicated (3 feet outside doubles side line) and other details given. For championship play, the space behind the base line—i.e. between the base line and fence (or wire netting)—should be not less than 21 feet and the space between the sidelines and the fence not less than 12 feet.

An 80-page booklet, "Tennis Court Manual" on construction, maintenance and equipment can be obtained for \$5.00 from H. O. Zimman, Inc., Publishers, 156 Broad St., Lynn, Mass. or the USTA, 51 E. 42nd St., New York, N.Y. 10017.

USTA Tournament Regulations

1. **Application.** The Tournament Regulations herein contained and the international Rules of Lawn Tennis shall be observed throughout all tournaments held by clubs, associations or organizations belonging directly or indirectly to the USTA. In any match conducted without officials the principles and guidelines set forth in the official USTA publication The Code shall apply. (The Code is available from USTA Publications, 71 University Place, Princeton, N.J. 08540.)

2. **Tournament Committee.** The governing body of a club, association or organization conducting a tournament will appoint at an appropriate time before the start of the tournament a Tournament Committee of at least two persons, indicating which member is to be Tournament Chairman (who may also be referred to as tournament director); the Referee will be an additional member of the Committee. This Committee will:

- a. Supervise all administrative details of the tournament, including keeping order on the grounds and obtaining any required USTA sanction.
- b. Appoint a referee, preferably a USTA-certified chair umpire, who shall be a member of the committee. The Tournament Chairman is not authorized to take over the prerogatives of the Referee.
- c. Issue a circular specifying the events, the dates of play, maximum number of sets in matches, and other pertinent details such as type of ball to be used, type of surface or surfaces, etc.
- d. Issue invitations and accept entries.
- e. Furnish the Referee a complete list of entrants (including alternates in priority) for all events, and, in conjunction with the Referee, determine the seedings.
- f. Act as an appeal body in cases in which a Referee has unilaterally disqualified a player; its decision on such an appeal shall be final.
- g. Within 10 days after the completion of a tournament submit to the USTA a complete report of all matches played (proper blanks are obtainable from the USTA or the Section), indicating where practicable each player's full name and address; and within 30 days after the completion file such reports as are required by USTA Standing Orders. Failure to submit these reports may bring about disciplinary action by the USTA Executive Committee.

3. **Referee.** The Referee will:

- a. Serve as a member of the Tournament Committee.
- b. Assisted by preferably two Committee members but at least one, make the draw publicly at the time and place specified by

- the Committee; preferably assisted by a Committee member, make substitutions in the draw when appropriate.
- c. Exercise general supervision over all aspects of play, including, but not limited to, the conduct and actions of players, umpires, ball boys, groundskeepers and the administrative crew. He is empowered to use his best judgment in all situations not specifically covered by the rules.
 - d. Appoint a deputy to act in his stead whenever he will be away from his normal post and out of touch with it for any reason whatsoever, including his participation in a match as a player or as an umpire. Either the Referee or his deputy must be present at all times when play is in progress.
 - e. Default a player for cause, which includes, but is not limited to, tardiness, misconduct, or failure to follow his instructions or those of the Chair Umpire.
 - f. Consider an appeal from a player who has been defaulted by the Chair Umpire; the decision of the Referee on such an appeal shall be final.
 - g. Schedule matches, assign courts (including moving a match in progress to another court), postpone or suspend play when weather, light, surface conditions or other circumstances justify so doing. (Suspension of a match because of darkness should be done only at the end of an even number of games in the set.)
 - h. Appoint and replace or re-assign, when necessary, chair umpires, line umpires and net umpires. The appointing of these officials (but not their replacement) may be delegated to the Chief Umpire, if there is one.
 - i. When he deems it appropriate, before the start of a tournament, or before the start of any round, or before the start of any match, order the use of the Point Penalty System.
 - j. Decide any point of law that a chair umpire is unable to decide or which is referred to him as an appeal by a player. When the matter under consideration affects the scoring of the match, the Chair Umpire will immediately bring it to the Referee's attention, suspending play during the decision; in all other cases of appeal play should be continued while the matter is being considered. The Referee's decision in such cases shall be final.
 - k. Within three days after the end of a tournament, report, either orally or in writing, to the sectional or higher grievance committee, any violations of Article 7, especially Paragraphs e, f, or g, or any other conduct violations.
4. **Chair Umpire.** The Chair Umpire will:
- a. Conduct the match in accordance with the Rules of Lawn Tennis and these Tournament Regulations.

- b. In the absence of any of his line or net umpires, assume himself all their duties except those which he may delegate to the players.
 - c. When the Referee or Chief Umpire has not given specific assignments to the various line umpires assigned to his match, make these assignments himself in the way best to utilize their services. (If he deems it advisable he may rearrange these assignments after the match has begun.)
 - d. Only if he deems it advisable, in response to a request from a player or for other reasons, request the Referee to replace one or more of his umpires. If a player requests that the Chair Umpire himself be removed the Chair will relay the request to the Referee. In any of these cases play should continue pending the Referee's decision.
 - e. Call the points, games and sets at the end of each, respectively, and when he is asked to call them, and record them on his scorecard.
 - f. See that the players change ends in accordance with the rules (allowing them no delay or rest during a tiebreak changeover), see that they resume play promptly at the end of an authorized rest period, and see that play is continuous.
 - g. Sign the scoreboard at the end of the match and deliver it without delay to the Chief Umpire or the Referee. (Should the Chair Umpire fail to do so, such an omission will not invalidate the match.)
 - h. When one of his umpires is unable to make a call, make the call himself if he can, availing himself of his own opinion, of the opinion of another official (including the Referee's) in a position to see the shot, or of an agreement between the players. While a replay is to be avoided if at all possible, he will order a point replayed if a valid call cannot be made.
 - i. When in his opinion playing conditions justify suspension of the match, advise the Referee and, when practicable, obtain his approval before suspending play. (See 3g.)
 - j. Make the final decision on every question of fact in the match other than those within the authority of the Net Umpire or the Line Umpires.
 - k. Decide all points of law, subject to an appeal by a player, on such a point, to the Referee. (See 3j.)
 - l. Permit no coaching in junior matches except as provided in Article 9.
 - m. Default a player for cause, which includes, but is not limited to, tardiness, misconduct, or failure by the player to comply with instructions.
5. Net Umpire. The Net Umpire, in the absence of other arrangements with the Chair Umpire, will:

- a. By signal or by a call of "net," make sure the Chair Umpire knows any time a served ball touches the net in passing.
 - b. Call all violations during play in which: (1) a ball in play touches a player; (2) a player touches the net; (3) a player invades his opponent's court; (4) a player strikes his opponent's return before it has passed the net; (5) a not-up (double-bounce) occurs; (6) a carry, double-hit or other illegal stroke is made. The Net Umpire's decision on any of these violations is final. He may be overruled only in the same circumstances under which a line umpire may be overruled. (See 6-a.)
 - c. See that balls are changed at the proper times, and check each new ball for suitability.
 - d. Adjust the net to the proper height before play begins, on changeover games at the start of each succeeding set, and at such other times as the Chair Umpire may desire.
 - e. Keep an alternate scorecard as a check for the Chair Umpire.
- 6. Line Umpire.** A Line Umpire will:
- a. Call all shots relating to the lines to which he is assigned; his decisions shall be final. (A line umpire may not be overruled on a question of fact except in Davis Cup, Wightman Cup and Bonne Bell Cup competition see Rule 29; he may be overruled when a decision is based on an incorrect interpretation of a rule.)
 - b. Promptly indicate to the Chair Umpire by an unsighted signal when he is unable to make a call within his area of responsibility.
 - c. On the Chair Umpire's request, provide an opinion, when he has a firm one, on a shot that is outside his area of responsibility.
 - d. When assigned to a baseline, a sideline, or a center line, call foot faults that pertain to his line.
- 7. Player.** A player may:
- a. If otherwise eligible, enter a regular men's or women's tournament without restriction as to age.
 - b. If otherwise eligible, enter a tournament in any of the minimum-age categories (Men's 35, Seniors 50, 55, etc.) if the player will have reached such minimum age by October 31 of the twelve-months period ending October 31 during which the tournament starts.
 - c. If otherwise eligible, enter a tournament in any of the maximum-age categories (12-, 14-, 16, 18- and 21-and-under) if the player is an amateur who has not reached such maximum age prior to October 1 of the twelve-month period beginning October 1 during which the tournament starts.

- d. If otherwise eligible, enter a parent-child tournament without restriction as to age, provided that the parent and child are blood relatives or that the child has been legally adopted by the parent.

N.B. The ranking year for all divisions except seniors and women is October 1 through September 30; for senior men, senior women and women the ranking year is November 1 through October 31. The eligibility year for any division coincides with the ranking year for that division.

- e. Not enter a tournament he knows he will be unable to finish, nor transfer his entry in a tournament to another player.
- f. Not enter more than one tournament scheduled for any part of the same period unless each tournament committee involved understands the situation and concurs with such arrangements as are made.
- g. After the draw has been made, not withdraw from the tournament except for illness, personal emergency or other bona fide reason.
- h. Not wear other than flat-soled shoes without heels at any time, except when playing on grass and the Referee has authorized the use of spikes (maximum length: three-eighths of an inch).
- i. Not depart from the grounds until he has obtained from the Referee either the time of his next match or a clearance to depart. Unless specifically authorized by the Referee, schedules of play carried in newspapers or other media are not official and a player utilizes them at his own risk.
- j. Be defaulted for cause, which includes, but is not limited to, tardiness, misconduct, or failure to comply with the Referee's or the Chair Umpire's instructions.
8. **Betting:** Neither the Referee, nor the Chief Umpire, nor any Umpire, nor any member of the Tournament Committee shall bet on any match in the tournament. If an infraction of this rule occurs, the Tournament Committee shall immediately remove the offender from any further connection with the tournament.
9. **Coaching.** During adult matches coaching is permissible provided it does not bring about a violation of Rule 30 or of the canons of sportsmanship. During individual competition in junior matches no coaching of any kind is permitted except during an authorized intermission (the one-minute odd-game changeover is not an authorized intermission). The same rules apply to junior team competitions unless they have been modified in advance by an agreement between the teams. Violation of this regulation renders the player and his adviser liable to disciplinary action, which may include disqualification of the player.
10. **Seeding.** While there is no requirement that every tournament have seedings, most tournaments of the elimination type as

distinguished from round-robin competitions – do use seedings, as a means of insuring that players of recognized outstanding ability are kept from having to confront each other in the early rounds.

- a. The Tournament Committee is empowered to seed players at a maximum ratio of one seed for every four players or major fraction thereof (i.e., two or three players more than an even multiple of four does justify an additional seed, one player more does not). The most preferred pattern is to seed one for each eight competitors. The draw sheet should list the seeded players, preferably in numbered order.
- b. In determining seedings the Committee should bear in mind that seedings merely represent its subjective ratings of the various players' chances of winning the tournament. These ratings cannot be based on whim, caprice, or "hunches", but instead must be justified by a reasonable amount of factual evidence. The Committee should consider all available evidence, including, but not limited to, rankings, current records, type of surface, and particularly head-to-head encounters.
- c. Illustrative of some common errors in seeding are: "He's ranked #1, so he must be seeded #1;" "He won the tournament last year so he must be seeded #1 this year;" "Since this is his first year as a senior and he has no record in senior play, he can't be seeded – or he can be seeded no higher than five." Consideration of the factual data mentioned in the preceding paragraph will obviously eliminate these errors. Also, two outstanding doubles players playing together for the first time should definitely be considered for a place on the seeded list.
- d. An even more common error, for example, is where the Committee in a 16-draw event seeds four and "places" four. Legally, there is no such thing as "placing." In the example cited, use of the term is an attempt to hide the fact that in reality eight players have been seeded instead of the permissible maximum of four. The rule of "one in four" was established to provide some matches between strong players in the first round, to increase the variety of a player's opponents, and to get away from the "strong-weak-strong-weak" pattern in the draw, thereby giving players who are usually first-round losers an occasional opportunity to meet each other and advance to the second or third round. No matter how sure the Committee is of its own omniscience, this is a rule that should not be violated.

11. Where The Seeds Go.

- a. Every seeded position is determined by lot. When there are just two seeds, they are drawn for the top line and bottom line. The same principle is followed for the remainder of

the seeds, with each seeded player in the top half of the draw being placed on the top line of his segment, and each seeded player in the lower half being placed on the bottom line of his segment. See sample drawsheet that follows.

- b. The principle of drawing to place the seeds will be followed even though it may result in one half of the draw having more seeds than the other half. For example, in a 32-draw with six seeds the luck of the draw might properly result in one half having four seeds and the other having two.
- c. Specifically:

1. For a 16-draw with two seeds: Seeds 1 and 2 are drawn for Lines 1 and 16. If there are to be Seeds 3 and 4, they are drawn for Lines 5 and 12.

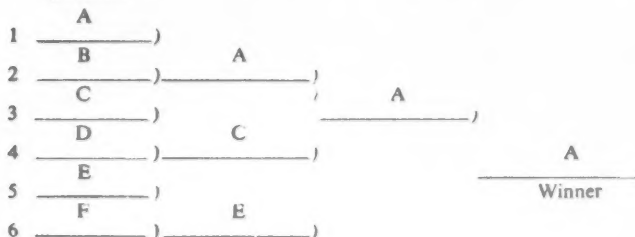
2. For a 32-draw, with four seeds: Seeds 1 and 2 are drawn for Lines 1 and 32; Seeds 3 and 4 are drawn for Lines 9 and 24. If eight are to be seeded, Seeds 5, 6, 7, and 8 are drawn for Lines 5, 13, 20 and 28.

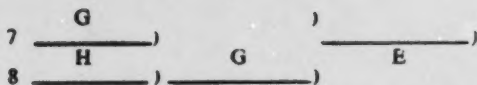
3. For a 64-draw, with eight seeds: Seeds 1 and 2 are drawn for Lines 1 and 64; Seeds 3 and 4 are drawn for Lines 17 and 48; Seeds 5, 6, 7, and 8 are drawn for Lines 9, 25, 40 and 56. If 16 are to be seeded, Seeds 9 through 16 are drawn for Lines 5, 13, 21, 29, 36, 44, 52, and 60.

4. For a 128-draw, with 16 seeds: Seeds 1 and 2 are drawn for Lines 1 and 128; Seeds 3 and 4 are drawn for Lines 33 and 96; Seeds 5, 6, 7, and 8 are drawn for Lines 17, 49, 80 and 112; Seeds 9 through 16 are drawn for Lines 9, 25, 41, 57, 72, 88, 104 and 120. (It is virtually unheard-of for tournaments of this size to be seeded more liberally than the one-in-eight pattern.)

12. How To Make The Draw

- a. When the number of players is 4, 8, 16, 32, 64, 128 or any higher power of 2 they shall meet in even pairs in progressive elimination in accordance with the following pattern:





- b. When the number of players is not a power of 2 the first round will have byes for the purpose of bringing to the second round a full bracket of players – i.e., a power of 2 – so that there can be an orderly progression down to two finalists. For example, with 27 players five of the lines on a 32-draw sheet would be marked “bye” and the five players drawn opposite those lines would move right into the second round without playing a match, to be joined there by the eleven winners of first round matches to make up an even sixteen. See sample draw sheet that follows.
- c. To place the byes in the draw start at the extremes and work toward the middle. The first bye goes on the line next above the bottom line, the second on the line next below the top line, and the third on the second line above the first bye, the fourth on the second line below the second bye, and so on in alternation. Obviously, if there is an odd number of byes the lower half will have one more bye than the upper half. This pattern of distribution of byes is mandatory for all sanctioned tournaments at the level of district, section or higher championships, except the Woman’s Collegiate Championship and other collegiate tournaments.
- d. Once the seeded players and the byes have been written in, fill in the rest of the draw by drawing the names of the remaining players and putting them on the unoccupied lines in the order in which they are drawn, starting at the top and moving downward in sequence.
- e. When the number of players is only a few over an even bracket – for example, 37 – it may be simpler, as an alternate to the method described in the preceding paragraph, to “build up” from a 32-draw sheet than to “build down” from a 64-draw sheet. To do this, create as many two-line pairings as there are excess players, starting with the bottom line in the upper half, then the top line in the lower half, then the next to the bottom line in the upper half, then the next to the top line in the lower half, and so forth in alternation. Obviously, if the number of excess players is odd there will be one more first-round match in the upper half than in the lower. A seeded player is not exempt from playing a first round match if his line in the draw is one of those to carry a double pairing.

- f. When the drawing procedure operates to bring together for their first match members of the same family, same school, same foreign country, same club, or same Section, the Referee may, at his discretion, place the second name drawn on the corresponding line of the next quarter of the draw. If this happens in the fourth quarter of the draw, the second name may be exchanged with the name on the corresponding line in one of the three preceding quarters, the specific one of these quarters being determined by drawing.

13. Substitutions In The Draw.

- a. When the number of entrants exceeds the number to which the draw is limited the Committee will prepare a list of alternates in priority for use by the Referee in replacing players who become unavailable for the competition. Priority on this list will normally be determined by ability; however, if priority cannot be determined using ability as a criterion then the determination will be made by lot. Dates of receipt of entries should never be used as a criterion provided the entries of all those considered were received before the deadline.
- b. In a draw which contains some byes the Referee, preferably assisted by a Committee member, may accept a late entry (or entries) and place the name in the last slot covered by a bye. While the taking or not taking of this action is strictly a prerogative of the Referee based on his estimate of the situation, in general it is desirable to encourage play rather than to discourage it.
- c. It might be logical to reject the late entry of a player whose ability would justify his being seeded, in that inserting his name in a bye slot might upset the balanced arrangement of the draw. On the other hand, it would not be illogical to insert the name of a player of much lesser ability in a bye slot.
- d. Unless the Referee determines that play has proceeded too far to make changes in the draw practicable, any player whose entry is received on time and is otherwise acceptable will not be denied a place in the draw because of administrative error or oversight on the part of the tournament officials even if it means remaking the draw or having a preliminary match.

14. **Violations.** Any player or official who observes a flagrant violation of these regulations may file a written complaint with the chairman of the grievance (or comparable) committee of the Section where the tournament was held, or with the Chairman, USTA Grievance Committee. In general, if the tournament included

32-PLACE DRAW SHEET

(With 27 entries, as here, maximum seed would be 7)

1. Seed 1 or 2					
2. By					
3.					
4. By					
5. Seed 5, 6, 7 or 8					
6.					
7.					
8.					
9. Seed 3 or 4					
10.					
11.					
12.					
13. Seed 7, 8, 5, or 6					
14.					
15.					
16.					
17.					
18.					
19.					
20. Seed 8, 5, 6 or 7					
21.					
22.					
23.					
24. Seed 4 or 3					
25.					
26.					
27. By					
28. Seed 6, 7, 8 or 5					
29. By					
30.					
31. By					
32. Seed 2 or 1					

N.B. The references hereon to Seeds 5, 6, 7, 8 do NOT mean that eight players could be seeded regardless of number of entries (i.e., less than 32). See preceding text.

any nationally ranked players it would be preferable to file such a complaint with the Chairman, USTA Grievance Committee. (See Sec. 41, USTA By-Laws.)

NOTE to Tournament Chairmen and Referees:

You may be administering tournaments that are under the auspices of Grand Prix, WCT, WTA, IPA or other major organizations whose regulations may be at variance with the foregoing in some respects. In such situations you should reach a firm understanding with the officials of the other organization — before the event starts — on all points of variation.

TIE-BREAK PROCEDURES

Authorized for 1976 USTA Sanctioned Tournaments at 6 Games All

The USTA has approved the same options as to tie-break methods for 1975 sanctioned tournaments as were available in 1974. These include the 9-point, 12-point, and 13-point methods for terminating a set after 6 games all. Also, the option to use No-Ad (maximum of seven points) scoring for individual games is continued. The tie-break procedure may be used, at the discretion of the tournament committee, either throughout a tournament event or events, or in a designated round or rounds, with such matches to be considered for ranking purposes as having equal merit with matches not utilizing a tie-break or No-Ad procedure. A basic requirement is that reasonable notice shall be afforded prior to the commencement of competition.

This departure from conventional scoring is permissive, not mandatory, and a tournament committee has the option of prescribing that, even in an event where a tie-breaker is in use, the identifiable final set of the match or matches in any designated round or rounds shall be decided by conventional scoring.

Tournaments requiring sanction from the International Lawn Tennis Federation (ILTF), Grand Prix events, and tournaments with prize money of \$17,500 or more, may use only the "Wimbledon" style 7-of-12-point method for tie-breaks, and may not use No-Ad. The 1974 annual meeting of that organization so determined, making an exception to allow the 13-point tie-break method for tournaments being conducted by World Championship Tennis (WCT). For Sectional ranking purposes any scoring method may be utilized with the consent of a Sectional Association, and matches held under such method may be considered on equal merit with other matches.

5 out of 9 Points (Sudden Death)

Singles: If it is Player A's turn to serve the 13th game (at 6-all) he shall serve Points 1 and 2, right court and left court; Player B then serves Points 3 and 4 (R and L). Players then change sides, and A serves Points 5 and 6; B serves Points 7 and 8. If the score reaches 4 points all, Player B serves Point 9 from the right or left court at the election of the receiver.

The set shall be recorded as 7 games to 6. The tie-break counts as one game in reckoning ball-changes.

Player B shall serve first in the set following the playing of the tie-break (thus assuring that he will be first server if this set also goes into a tie-break). The players shall "stay for one" after a tie-break.

(Umpires should note that, if a ball change were called for on the tie-breaker game, the change should be deferred until the second game of the following set, to preserve the alternation of the right to serve first with new balls.)

Doubles: In Doubles the same format as in singles applies, provided that each player shall serve from the same end of the court in the tie-break game that he has served from during that particular set. (Note that this operates to alter the sequence of serving by the partners on the second-serving team.)

7 out of 12 Points ("Wimbledon" Method as Approved by ILTF)

Singles: A serves first point (from Right court); B serves points 2 and 3 (Left and Right); A serves points 4 and 5 (Left and Right); B serves point 6 (Left) and after they change ends, point 7 (Right); A serves points 8 and 9 (Left and Right); B serves points 10 and 11 (Left and Right), and A serves 12 (Left). If points reach 6-all, players change ends and continue as before. A serves point 13 (Right); B serves points 14 and 15 (Left and Right); etc., etc., etc., until one player establishes a margin of two points. Players change ends for one game to start the next set, with Player B to serve first.

Doubles follows the same pattern, with partners preserving the sequence of their serving turns.

(Assuming A & B vs. C & D) Player A serves first point (Right); C serves 2 and 3 (Left and Right); B serves 4 and 5 (Left and Right); D serves Point 6 (Left) and, after teams change ends, point 7 (Right) . . . A serves 8 and 9 (Left and Right); C serves 10 and 11 (Left and Right), and B serves point 12 (Left) . . . If points reach 6-all; teams change ends and continue as before - B serves point 13 (Right); D serves points 14 and 15 (Left and Right); etc., etc., until one team establishes a margin of two points. Teams change ends for one game to start the next set with team C & D to serve first.

Note: In this Wimbledon style tiebreaker, serve rotation is maintained, although each of the four players may find that he must serve from the end of the court opposite to that from which he served during the set.

In 1975 WCT is continuing use of a "7-of-13" variation exactly the same pattern as Wimbledon's 7 out of 12 points but with the 13th point deciding the set. That point is served by the player who had served the 12th point, and the Receiver has the option as to left or right court. Players "stav for one" at the end of this tiebreaker.

"No-Ad" Scoring

The "No-Ad" procedure is simply and precisely what the name implies.

A player need win only four points to win a game. That is, if the score goes to three-points-all (or deuce) the next point decides the game—it's game point for both players. The Receiver has the right to choose to which court the service is to be delivered on the seventh point.

If a No-Ad set reaches 6 games all, a tiebreaker shall be used which normally would be the "5 out of 9 points" Sudden Death method.

Note: The score-calling terminology for a match played in No-Ad may be either in the conventional terms or in simple numbers, i.e., "zero, one, two, three (game point), game."

Cautionary Note:

Any ILTF tournament should get special authorization from ILTF before using No-Ad.

USTA JUNIOR DAVIS CUP SECTIONAL TEAM CHAMPIONSHIP

1. The event shall be known as the USTA Junior Davis Cup Sectional Team Championships.
2. This event be held annually.
3. The competition is open to teams representing each of the Sections comprising the United States Tennis Association. Each of said sections shall be represented by one team which shall consist of male players only.
4. Membership on each Section Team shall be by arbitrary selection of the section and the Junior Davis Cup Chairman in each section shall select the sectional team for his own section; the president of each section shall act in case his section does not have a

sectional Chairman. The method of selection for membership on the sectional team may be as each section elects, either on the basis of ranking lists, center tournaments, regional center play-offs, inter-city Junior Davis Cup matches, tournaments, elimination try-outs, round-robins, character, sportsmanship and availability, or any combination of these factors.

5. Players selected for membership on each Section's team must be permanent residents of their respective Sections. Each team member shall not have reached his 21st birthday prior to the 1st day of October of the year immediately preceding the year of the tournament and each player is required to possess current USTA membership card.

6. The number of players on a Sectional Team shall be a maximum of four. (Maximum two singles players and one doubles team for scoring purposes.)

7. The referee of the tournament shall be the National Chairman of the Junior Davis Cup Committee of the USTA or the person designated as referee by him.

8. All matches shall be played under the laws and rules of lawn tennis as sanctioned and interpreted by the USTA. The tournament shall consist of both singles and doubles play. Points shall be earned in both singles and doubles as follows: Winner—5 points; Finalists—4 points; Semi-finalists—3 points; Quarter-finalists—2 points. A consolation tournament for singles only shall be conducted at the same time and place as the tournament herein provided and first-round losers shall automatically be entered in the consolation round and shall play in it. Points in the consolation round shall be at one-half the value of the main tournament. The Sectional Team scoring the most points in the main tournament plus the points earned by its players in the consolation event, shall be declared the winner of the event. In case of ties, the two Sectional Teams earning the same number of points shall be declared co-holders of the place earned by their point scores.

USTA GIRLS' NATIONAL INTERSECTIONAL TEAM CHAMPIONSHIPS

1. The bowl shall remain in perpetual competition.
2. Competition shall be limited to players qualified to participate in Girls' Tournaments as set forth in the Regulations of USTA for Junior Qualifying and Championship Tournaments.
3. The competition shall be called the "*USTA Girls' National Intersectional Team Championships*" and shall be held annually near the locality where the USTA Girls' 18 National Championship is played.

4. The competition shall be open to one team representing each of the Sectional Association of USTA.
5. The Bowl will be awarded annually to the Sectional Association represented by the winning team, which Sectional Association shall retain custody thereof until the next annual competition. Such Association shall have its name and year of competition engraved thereon.
6. There shall be a "National Committee for USTA Girls' Intersectional Team Championships" appointed by the President of USTA. The National Committee shall make all arrangements for and shall conduct the matches. If the Chairman is unable to be present on any day of the competition, she shall appoint a member of the Committee to serve as acting Chairman of the Committee.
7. The Competition shall be scheduled to begin at least one week before the USTA Girls' 18 National Championships or following the 18 National Championships as scheduled by the National Committee.
8. The Chairman of the National Committee for Girls' Intersectional Team Championships shall be the Referee of the Competition. If she is unable to serve, the Referee shall be appointed by the committee.
9. The matches shall be played on the same type of court surface as that on which the Girls' 18 National Championships is played, except when in the judgment of the Referee, conditions of weather or of courts on the days of play make this inadvisable.
10. No team will be allowed to compete without a chaperone in residence in the dormitory.
11. Each Team Match shall consist of five Singles Matches and two Doubles Matches. The same or different players may be used in Singles and in Doubles. Eight players may be included on each team but all must be included in the line-up, either in Singles or in Doubles.
12. The draw shall be made pursuant to the Tournament Regulations of USTA and teams shall be seeded under the Rules for Seeding the Draw. Notice of the time and place for making the draw shall be given by the Committee to the captain of each of the competing teams who shall be privileged to attend on behalf of her team. The name of each team captain shall be sent to the Chairman of the National Committee for USTA Girls' National Intersectional Team Championship Matches at least one week before the date of the event.
13. At the beginning of the captains' meeting each captain shall furnish the Referee with the names of her singles players in the order in which they will play with one substitution, if desired.

The two doubles teams shall be submitted in their correct order. The order for both the singles and doubles shall continue for the duration of the Matches. It shall be considered a point of honor to list the players in the order of their respective abilities at the time. In the event of the disability of any player previously named the Captain of the team may, with the consent of the Referee, play the substitute. In the event of a substitution the players shall move up in order, and the substitute shall play in the No. 5 place.

14. The Referee shall have sole charge of arranging the time at which matches shall start and the courts upon which they shall be played. Umpires and Linesman should be provided by the Section where the Championship is held.
15. One point shall be counted for each singles match and one point for each doubles match. Any default shall count one point for the opposing team. The team winning the majority of the points shall be the winner of the match.
16. All matches shall be played pursuant to the Rules of Lawn Tennis of the United States Lawn Tennis Association.
17. These Regulations may be amended from time to time, as experience dictates, by the National Committee for Girls' National Intersectional Team Championships, with the approval of the President of USTA.

USTA POINT PENALTIES SYSTEM

The USTA Annual Meeting at Sarasota, Fla. heard reports of successful results in tournaments where the Point Penalty System is announced as being in effect - it being emphasized that often the announcement itself is all that's needed to improve conduct control. This was brought out not only in the meetings of the Scoring and Playing Rules Interpretation Committee and the Umpires Committee, but also on the floor at the open meeting of the USTA Executive Committee.

It was the sense of that meeting that particulars and guidelines of P.P.S. be given a new and wider circulation, and the Executive Committee directed that the procedure be included in the 1976 Yearbook as well as in A Friend At Court. This was the third year in a row that the Executive Committee has given the green light to use of this deterrent to unacceptable court behavior.

Herewith, for your convenience, is "how it works":

"The Chair Umpire shall be the sole judge of *any* such suspension, delay or interference, and after giving *one* warning may, *in his discretion*, penalize an offending player by awarding the opponent *one or two points per offense*, or disqualify the offender." (New material in italics.)

And (2) this sentence would be added:

"Similarly the Chair Umpire is empowered to deal with instances of unsportsmanlike behavior or misconduct by the awarding of point penalties generally, but not necessarily, after one warning. This does not rule out a competitor's liability to summary disqualification for a single flagrantly unsportsmanlike act."

Obviously there are infinite degrees in instances of bad behavior, and the Chair is entitled to make penalties commensurate with the seriousness of the offense. (see Guidelines)

A competitor will not have the right to appeal to the Referee from any point or game penalty until after three penalties have been levied by the Umpire.

Note Well: The use of point penalties is the option of the Referee, provided notice is given before the start of the event, the start of a round, or the start of an individual match. (Tournament Regulations 3-i)

The Point Penalties System also provides for penalties of one game for each five minutes or fraction thereof of lateness from the time the match is called and both court and opponent are ready. This does not rule out a player's liability to outright default for unexcused lateness beyond the set deadline.

Nothing in the Point Penalties System rules out the *subsequent* levying of monetary penalties, suspensions, or other disciplinary actions by whatever governing body has jurisdiction. P.P.S. has the function of helping on-the-court officials to fulfill their proper role of ensuring *fair conditions of play*.

In tournament play with no chair umpire, P.P.S. may be invoked by the Referee and penalties levied by him, if on the basis of his first-hand observation.

All umpires are urged to remember: **THE OBJECTIVE IS TO DETER, NOT PUNISH.**

GUIDELINES - While it is recognized that it would be impractical to prescribe rigidly specified penalties for every conceivable type of degree of misconduct, the USTA Umpires Committee has suggested the following as appropriate:

1. Violations of present provisions of Rule 30:

First offense - a warning; Second offense - one point; Third and subsequent offenses - one game each, or disqualification. (The following constitute such violations: Taking more than one minute on changeover; toweling off at times other than changeover - except after a fall or cut; prolonging argument over a decision after being directed to resume play - this latter would constitute a second offense.)

2. Failure to commence play after expiration of established warmup period: one point.

3. Lateness in being ready to start a match, court and opponent being available: one game for each five minutes or fraction thereof.

Lateness after an intermission: one point for each minute or fraction thereof.

4. Profane or obscene language or gestures:

A. Directed at no one in particular: First offense a warning; Second one point; Third and subsequent offenses – one game each.

B. Directed at an official, opponent or spectator: First offense – one point; second – one game; Third offense disqualification.

5. Minor unsportsmanlike acts, such as knocking a ball out of the enclosure; First offense – a warning; Second and subsequent one point each.

Major unsportsmanlike acts, such as hitting a ball or throwing a racket at or near an official, ball boy or spectator, or intentional racket-dropping to disconcert opponent: First offense two points; Second – one game; Third disqualification.

RULES OF VASSS 'SINGLE POINT' HANDICAP PLAY

(All USTA rules apply except in scoring)

1. It is scored as at Table Tennis – 1, 2, 3, 4.
2. The serve changes from A to B every 5 pts. (5, 10, 15). This 5 pt. sequence is called a 'Hand'. Serve changes at the end of the set but not side (N-S). The receiver or team in the fifth point in the hand may choose to receive in right or left court.
3. The first point in each 'Hand' (1, 6, 11, 16, etc.) is served into the Right or Forehand Court.
4. Sides (N-S) are changed on the odd 'Hand', 5 pts. (5, 15, 25).
5. The official set is fixed at 31 points. But where time is at a premium, 21 points may be used.
6. If there is no umpire the Server is required to **call score loud and clear** after each point.
7. The winner of the set must lead by at least 2 points (31-29). Maximum number of points 69, playing time 25-30 minutes.
SINGLE POINT IS THE KEY TO EFFICIENT HANDICAPPING.
Sudden death decides winner as 30 points all in single point set.

HANDICAP RULES

The VASSS SINGLE POINT method is used

Play shall proceed as if the points of the handicap had actually been played.

(a) Handicap 2 Points: Server commences serving Point 3 into

Right or Forehand Court. Service and Side both change after 3 Points (2+3=5).

- (b) Handicap 6 Points: Server commences serving Point 7 into the Left or Backhand Court. Service changes after 4 Points (6+4=10). Sides (N S) are changed after 9 points (6+9=15).

The giver of the handicap shall have the choice of Service and Side in the opening Set, choice of Service only in subsequent sets. At the conclusion of the set players do not change Sides. (N-S).

TO ESTIMATE HANDICAP POINTS TO BE RECEIVED

AT 30-30 IN 9-POINT TIEBREAK

1-3 Points - NO POINTS Handicap, 4-7 Points - 1 Point Handicap, 8-14 Points - 2 Point Handicap, 15-21 Points - 3 Point Handicap, 22-30 Points - 4 Point Handicap.

In the 9-Point Tiebreak handicap, points shall be considered as if already played. Examples: 1 point handicap, A shall serve point 2 into Left or Backhand court. 2 point handicap, B shall serve point 3 into Right or Forehand court. (See Tiebreak Diagram).

VASSS RULES FOR SCORING

ROUND ROBIN MEDAL PLAY (RRMP)

A ROUND may be any multiple of 20 (40 - 60 - 80) total points or one 31 Point set is used, the winner shall receive a 5-Point bonus for the win, plus the unplayed Points in the set (e.g.: A wins 31 - 10, his score will be 31+5+20=56 Points).

SERVICE AND SIDES are changed as in 31 Point. See Rules 2, 3, 4, 5.

INDIVIDUAL HANDICAPS are estimated against scratch for the number of points in a round, as decided by the tournament committee.

TOURNAMENT TEAM HANDICAP is the sum of the individual players' handicaps.

IN CASE OF A TIE, follow Tiebreak Rules and Diagram.

IN FIRST-CLASS COMPETITION, ON FAST SURFACES such as grass, where the 'power serve' and 'net rushing' tactics virtually eliminate ground stroke play, IF DESIRED the balance MAY be maintained by the server serving from a line 3 feet back of the baseline, or by allowing only a single serve.

Badminton

Introduction (One Wonders Why)	<i>Sybil P. Hilton</i>	112
--	------------------------	-----

COMMITTEES AND ARTICLES

NAGWS Badminton Guide Committees		113
--	--	-----

Badminton on Wheels?	<i>Paulette Schuster and Diedra Stark</i>	115
--------------------------------	---	-----

Badminton Is for Little People Too. <i>Georganna S. Cottman</i>	118
---	-----

Badminton as a Motor Skill: An Adaptive Perspective	<i>Shirl James Hoffman</i>	120
--	----------------------------	-----

Badminton Competition	<i>Patricia McCarrick</i>	124
---------------------------------	---------------------------	-----

Competitive Badminton and Tension Control	<i>Marigold A. Edwards</i>	126
--	----------------------------	-----

Championship Performance	<i>Judianne Kelly</i>	129
------------------------------------	-----------------------	-----

Equipment Demands	<i>Elizabeth Green</i>	131
-----------------------------	------------------------	-----

Badminton Rules Summary	<i>Charlotte Ackerman</i>	134
-----------------------------------	---------------------------	-----

Badminton Bibliography	Revised by <i>Mary Wylie Ford</i>	136
----------------------------------	-----------------------------------	-----

Badminton Visual Aids	Revised by <i>Judianne Kelly</i>	137
---------------------------------	----------------------------------	-----

RULES

Laws of Badminton		139
-----------------------------	--	-----

Introduction (One Wonders Why)

Badminton is a tremendously popular sport in school with all young people. It offers a contagious challenge to all who participate in it, yet it receives little recognition and still less promotion. It seems our challenge, as badminton enthusiasts, is to generate greater interest in our sport. We need to find and/or develop more accessible areas for all interested players, including the handicapped, to obtain Olympic stature for those now competing on the international level, and to foster outlets for professionals as other sports do. Perhaps the growing trend toward coeducational classes will lend impetus to these efforts. Each of us can work individually toward these goals and maybe together we can achieve the stature badminton deserves.

Sybil P. Hilton, Chairperson
NAGWS Badminton Guide Committee

110

NAGWS BADMINTON GUIDE COMMITTEE*
1976-78

SYBIL P. HILTON, *Chairperson*, Bakersfield College, Bakersfield, CA 93305
GEORGANNA S. COTTMAN, *Past Chairperson*, Easton Middle School, Easton, MD 21601
CHARLOTTE ACKERMAN, Talcott Junior High School, West Hartford, CT 06110
MARIGOLD A. EDWARDS, University of Pittsburgh, Pittsburgh, PA 15261
MARY W. FORD, Winthrop College, Rock Hill, SC 29733
JUDIANNE KELLY, Bell Junior High School, Garden Grove, CA 92641
MARGIE J. MORRISON, Los Angeles City College, Los Angeles, CA 90029
MERLE PACKER, Arizona State University, Tempe, AZ 85281
BETTY WILCOXON, Foothill High School, Bakersfield, CA 93306

NAGWS BADMINTON GUIDE COMMITTEE
1978-80

MARIGOLD A. EDWARDS, *Chairperson*, University of Pittsburgh, Pittsburgh, PA 15261
SYBIL P. HILTON, *Past Chairperson*, Bakersfield College, Bakersfield, CA 93305

*The current *Guide* was prepared by the 1976-78 committee; the 1980-82 *Guide* will be prepared by the 1978-80 committee.



Georganna S. Cottman



Mary Ford



Sybil Hilton



Charlotte Ackerman



Judianne Kelly

112

Badminton on Wheels?

PAULETTE SCHUSTER
DIEDRA STARK

Paulette Schuster received her B.S. and M.A. degrees from California State University at Northridge. She is a Valley Field Representative for the City of Los Angeles, Department of Recreation and Parks, with a special concern for the mentally retarded. Since 1974 she has done the recreational programming for all the handicapped through the city parks in the San Fernando Valley.

Diedra Stark received her B.A. and M.A. degrees from California State University at Long Beach. She is an assistant professor of physical education at Los Angeles Valley College. In 1973 she coached badminton, in 1975 she coached basketball/volleyball, and since 1976 she has been the women's athletic director at Los Angeles Valley College.

Wheelchair sports existed as early as the 1800s. However, within the last 20 years, the handicapped players' enthusiasm and courage have made wheelchair sports highly competitive. The adapted rules of badminton for the physically handicapped will encourage more disabled individuals to participate and will help maintain a high standard of competition and quality of play for the participant and the spectator. Any individuals having a permanent disability of the lower extremities will benefit through participation in wheelchair badminton.

Rules and Definitions

Player

The word *player* applies to all those who, because of permanent severe leg disabilities or paralysis of the lower portion of the body, would be denied the opportunity of playing badminton were it not for rule modifications regarding the wheelchair and the playing area.

Wheelchair

- The wheelchair shall be the standard Everest & Jennings Universal model or its equivalent.
- The height of the seat must not exceed 21" from the floor.
- Seat cushions in the chair are permitted only for special medical and therapeutic reasons. Under these circumstances, a medium foam rubber pad is permitted (4" maximum thickness).

- d. A heel strap of $\frac{1}{4}$ " wide (minimum) must be attached to the foot platform bars.

Rule Modifications

Wheelchair badminton is played in accordance with the American Badminton Association rules with very few modifications. These modifications are as follows:

Court

The court shall be laid out as in Figure 1 with only one addition; the short service line (Line A) becomes the front boundary line. There shall be an additional line extending from sideline to sideline, $2\frac{1}{4}$ feet behind the front boundary line (Line A), which will become the new short service line (Line B). All birds falling between the front boundary line (Line A) and the net shall be considered out-of-bounds.

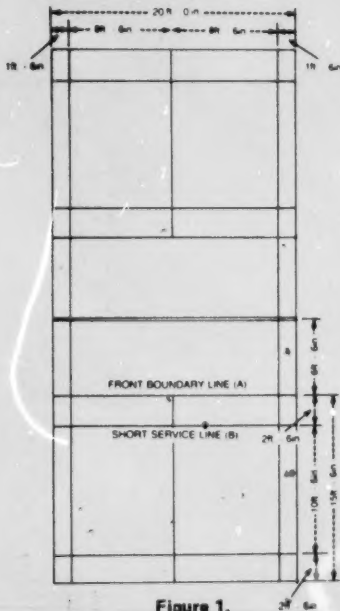


Figure 1.

Faults

The wheelchair is considered a part of the player. Therefore, the general rules of birdie contact shall apply. Any bird striking the player or player's wheelchair whether within or outside the boundaries of the court shall be considered a fault.

Wheelchair Locomotions (Actions)

Movement of the wheelchair may occur with either the player's hands or by using the racket handle to push the wheels of the chair.

All other rules regarding posts, net, shuttles, scoring and faults shall remain the same as the current American Badminton Association's interpretations.

Summary

A program of adapted sports such as badminton encourages and promotes active participation rather than passive observation by the physically handicapped in a competitive framework with the able-bodied, thus providing a unique outlet that not only strengthens the body and mind, but provides for emotional release, morale building and positive reinforcement.

Badminton is for Little People Too

GEORGANNA S. COTTMAN

Georganna S. Cottman was chairperson of the 1976-78 NAGWS Badminton Guide committee. She received her B.S. from Morgan State University, Baltimore, Maryland and her M.E. from Frostburg State College, Frostburg, Maryland. She has the maturity of two decades of teaching experience which helped her formulate her principles into A Guide to Contract Teaching in Physical Education. Her physical education expertise is utilized by Easton Middle School in Easton, Maryland.

Badminton is a good game for a young child. If a child can hold a racket, then the child is ready to be taught how to play the game.

Badminton is an inexpensive game. Many families have a badminton set in their home.

Begin with these suggested approaches in teaching a young child badminton:

1. Have the child hold the racket up with the face of the racket toward you and slightly back.
2. Toss several shuttlecocks (birdies) toward the face of the racket and have the child try to hit it.
3. If the child can hit the birdie from a toss using overhand shots and side-arm shots, then try tossing the birdies slightly away so the child will have to move toward the toss.
4. Try tossing the birdie to the child's left or backhand.
5. Follow the same progression, this time *hitting* the birdie to the youngster. Be sure to have the child hit the birdie hard so it will come back to you.
6. When you are hitting the birdie to the child, use the underhand serve so the youngster will try to serve it back to you. (Do not try to teach the serve at this point.) You may or may not use a net in the beginning skills.

Serving

Do not rush the child into serving. If the child observes you hitting the birdie using the underhand serve, he/she should start trying to imitate you.

After you have observed the child trying to serve underhand, then teach the correct way to serve. Stress that the birdie should be struck below the waist using the underhand or side-arm stroke. Perhaps you should use a net at this stage of instruction.

It may be best to teach a small group of younger children so they can see one another's progress. Space the children so they have plenty of room for hitting and moving toward the birdie and the net, if a net is used.

Always remember to teach the younger child to play the game for fun and enjoyment. Do not bore the child with, "you are not hitting it correctly or serving it correctly." The main idea is to get the child to hit the birdie over the net so the bird can be rallied back and forth with another person. Correct form will come later.

Scoring

When the student is ready to play a game, then introduce scoring. Stress the idea that a point is won or made only if the student or the student's partner served and the other side does not hit the birdie back on court. For younger children, use several players for the game as you would in volleyball. Let them rotate as in volleyball. Limit the game to 11 points.

If you are using the regular badminton court with one or two players, follow the regular badminton rules for serving (right or left courts).

Badminton as a Motor Skill: An Adaptive Perspective

SHIRL JAMES HOFFMAN

Shirl Hoffman is associate professor of education at the University of Pittsburgh where he teaches graduate and undergraduate courses in motor learning, pedagogical kinesiology and badminton. His B.S. degree was earned at The King's College, Briarcliff, Manor, New York, and his M.A. and Ed.D. degrees from Columbia University in New York City.

The model of skill acquisition popular among contemporary researchers, at least in its generic form, is the information processing model. Broadly defined, such models conceptualize skilled performance as a series of operations in which the learner identifies and organizes perceptual input, uses the input to reach a decision regarding the appropriate response, and formulates and monitors a movement.

Given the heavy emphasis being placed on the perceptual and analytical processes in skill learning, one notices an apparent gap in traditional instructional design in badminton. Badminton textbooks are largely books which describe how badminton players should move. Even a large portion of badminton research has been devoted to detailed descriptions and quantifications of the movements used in stroke production. It is my strong suspicion that the compelling mission of most badminton teachers is to tell their students how to move. The key to improved badminton playing is through intensive work on stroke mechanics — or so most of us have believed.

Yet there is a certain danger inherent in reducing a motor skill to a matter of technique, and teachers whose pedagogy is confined largely to teaching students how to execute these idealized techniques have obviously failed to take into account what I refer to as "the adaptive nature of motor skills."

By "the adaptive nature of skill," I am referring to the fundamental requirement of any skilled movement that it conform (or adapt) to spatial and/or temporal features of the immediate environment. Skilled behavior, particularly in an activity such as badminton where the environment is constantly changing, requires a rather precise adaptation of the learner's response to key environmental events if the skill objective is to be achieved. The stroke, however elegant, must match the environmental demands. Thus, the effective badminton stroke is not merely a technically sound one, but one that contacts the shuttle at the correct place and time.

The teacher who views badminton from an adaptive perspective understands the critical importance of attending to the flight-path of the shuttle. The teacher also appreciates that the ultimate presentation of the shuttle in the vicinity of the learner is merely one in a constellation of relevant environmental events that must be taken into account. The instructor further realizes that the relevant environmental events are not always known or easily recognized by the beginner and that the speed with which they can change is frequently faster than the learner's ability to adapt to them, necessitating prediction and anticipation by the learner.

Analyzing the game from an adaptive perspective, the instructor appreciates the vital importance of developing proficiency in visual tracking of the shuttle. The peculiar non-parabolic flight-path of the shuttle and its tendency to markedly decelerate as it approaches the awaiting player renders it unique among projectiles that are commonly intercepted by sport participants. Scores of studies have demonstrated that visual tracking can be improved as a result of practice, yet few textbooks mention the importance of tracking or offer suggestions on how it can be improved. Likewise, too few teachers devote time in the initial lessons to practice of visual observation of the shuttle as it moves to the player from various locations on the opposite court.

The learner must track the shuttle to predict its ultimate destination and the precise time of its arrival. For years we have taught students to "keep your eye on the shuttle." Yet, knowing what we do about the inherent time lags in the information-input to response-output chain, it might be more appropriate to emphasize *where the shuttle will be rather than where it is*. Moving into position for contact with the shuttle requires at least one reaction time plus the time required to move the body to the new location. Moving to where the shuttle *is* will always be a move too late!

How do students learn to position themselves in proper relation to the shuttle to meet such exacting requirements? Most likely by having the value of prediction called to their attention, and by providing ample opportunities for practice. Like the basic strokes, it is a skill learned only through practice.

The information represented by the opponent's position and movements is also a consideration that should be brought to the beginner's attention. The fundamental nature of the game — "hitting the shuttle where the opponent ain't" — requires that the position of the opponent be taken into account by the player *from the beginning*. (To fail to teach such a basic point to the learner from the beginning is to hide the very goal of the skill.)

Badminton strategy involves deliberate attempts by players to mask the preliminary cues which will help the opponent anticipate

the type of shot that will be executed. Most beginning texts stress the importance of camouflaging and "holding the shuttle" as basic deceptive skills to be mastered by beginners. Yet little is written about the equally important task of penetrating the opponent's camouflage to detect subtle body movements that will provide vital preliminary information.

The foregoing examples are only a few of the many implications that can be drawn from current models of skill acquisition to instructional design in badminton. Obviously the learner will only have developed proficiency when he/she has mastered both the strokes (technique) as well as the ability to attend to and interpret relevant environmental cues. Both are important, but care should be taken to avoid excessive emphasis on the former, particularly in beginning classes. It has a way of denying the awesome importance of the latter.

References

- Barth, D.A. A cinematographic analysis of the badminton backhand stroke. M.S., University of Illinois, 1961.
- Brown, Dulcie Patricia. The effect of augmenting instruction with an improvised teaching aid for college women in learning selected badminton skills. D.P.E., Indiana University, 1969.
- Cranston, Virginia Agnes. A study of the relationship of RT, MT and visual tracking to performance in badminton. M.S., Smith College, 1967.
- Earley, Phyllis J. A cinematographic analysis of selected badminton strokes. M.A., Texas Woman's University, 1973.
- Gasson, Ivo S.H. An experiment to determine the possible advantages of utilizing instant television for university instruction in badminton classes. M.S., University of Washington, 1967.
- Gentile, A.M. A working model of skill acquisition with application to teaching. *Quest*, January 1972, 3/23.
- Higgins, Joseph R. Movements to match environmental demands. *Research Quarterly* 43: Oct. 1972, 312-336.
- Marteniuk, Ronald G. *Information Processing in Motor Skills*. New York: Holt, Rinehart & Winston, 1976.
- Poole, James R. A cinematographic analysis of the upper extremity movements of world class players executing two basic badminton strokes. Ed.D., Louisiana State University, 1970.
- Rogers, Wynn. *Advanced Badminton*. Dubuque, IA: William C. Brown Co., 1970.
- Smith, K.M. A preliminary investigation of "intention-displaying movements" in tennis and badminton. M.A., Russell Sage College, 1953.

Washington, Jean. Construction of a wall test for the badminton short serve, and the effect of wall practice on court performance. M.S., North Texas State, 1968.

Whiting, H.T.Z. *Acquiring Ball Skills*. Philadelphia: Lea & Febiger, 1969.

Zimmerman, Patricia A. The effect of selected visual aids on the learning of badminton skills by college women. Ph.D., University of Iowa, 1971.

Badminton Competition

PATRICIA McCARRICK

Patricia McCarrick received her B.S. from Syracuse University, her M.A. at Stony Brook University in New York, and her administrative certificate at Hofstra University, Hempstead, New York. She has played competitively, coached junior competitors, run tournaments and coached at a badminton camp. She is now director of physical education and athletics for Miller Place School District in New York.

Badminton attempts to provide competition for differences in ability. Every badminton player who is a member of a club is classified as an "A" (most skilled), "B" or "C." If a player improves and defeats players of a particular grouping in tournament play, that player may be given a higher rank for the next season. It is possible to be ranked differently in singles, doubles and mixed doubles. For example, a player may be "A" in doubles, but be "B" in singles and in mixed doubles. A player may always play up in the next rank but may not play down, e.g., if a player is of a "B" rank, that player may not play in a "C" tournament.

When desiring to enter a tournament, one should be aware of the type of tournament it is. In an open tournament, i.e., one in which anyone may enter, one frequently finds nationally ranked players. A "B" player or strong "C" may wish to enter an open tournament for the experience. In a closed tournament there are restrictions to the entry which could be, and usually are, geographical. A tournament labeled "B" or "C" means just that. A tournament labeled handicap means a lesser player will be given an advantage (points) when playing an opponent of higher rank. This type of tournament is usually fun and good experience.

In addition to the above tournaments, badminton has three divisions in the junior classification, 13 & under, 15 & under, and 18 & under. Throughout the year there are several junior tournaments culminating in the junior nationals around April. The results in junior nationals are used as the prime criteria for ranking junior players in the USA.

In order for adult players in the USA to become ranked they must compete in at least three open or "A" tournaments and have good results against other top players. Then at the end of the year, after the Nationals, a ranking committee reviews the records of top contenders and arrives at a National ranking list. This list, along with the Junior National rankings, is published each year in the *Badminton USA* magazine.

It is important for players to become involved in badminton tournaments, for it will perk up their interest and improve their skills. The excuse, "I'm not good enough," does not hold true in badminton.

Competitive Badminton and Tension Control

MARIGOLD A. EDWARDS

Marigold Edwards did her undergraduate work in New Zealand at the University of Otago and the University of Canterbury. She earned her Ph.D. at the University of Pittsburgh. She has competed in badminton, tennis and squash, and served as a clinician for lifetime sports. At present she is an associate professor who teaches lifestyle education and tension control to classes at the University of Pittsburgh.

Badminton performance is determined largely by three components: conditioning, practice, and desire or motivation. Fitness research and sport psychology provide guidelines for improvement; of the three, practice is probably the most acceptable traditionally and usually mimics what champions "do" and/or the practice regimens of other sports. Practice, from a neuromuscular view, is refining (polishing) the Motor Unit Firing Sequence (MUFS). What does this mean? Every act, such as hitting a crosscourt drop from the deep backhand corner, is a series of muscle contractions and relaxations that vary in sequence, intensity and duration. These patterns of neuromuscular contractions and relaxations, which collectively are called badminton, are all the specific MUFS's for the component skills of the game. The better the player, the more often that person can reproduce the proper MUFS. Sometimes the MUFS breaks down due to overeffort, fatigue, loss of confidence, lapse in concentration, etc., and performance deteriorates resulting in a missed shot or a series of errors. What to do?

MUFS control is the objective of tension control, a self-care skill that has to do with everyone's everyday living. Tension control is the voluntary self-regulation of neuromuscular tensions in muscles to match the effort demands of the task. Physiologically, tension is that muscular state (one of two states) in the presence of neural impulses and is called contraction. Tension can be present at very high or low levels or any level in-between. The opposite of the tension state (the second of two muscle states) is relaxation; this "giving up of contraction," occurring likewise in greater or lesser amounts, is reflected in relatively fewer neural volleys. The basis for tension control is verifiable by electromyography (EMG). Central to the concept of tension control is the ability to distinguish those muscle groups necessary for a task and to maintain their optimum activation while muscle groups not participating are relaxed

to lowest possible levels. When effort matches task demands, the result is efficient performance.

If an athlete has learned tension control, either through a systematic procedure or natural acquisition, the faltering of the MUFS and the resultant loss of neuromuscular control can be avoided.

There are also additional benefits. Tension control is a method of anxiety management. It means efficiency; by minimizing waste energy, fatigue is delayed. Tension control also means the ability to snatch brief periods of high-quality rest for muscles between points, games and matches which could make the difference between winning and losing:

The old "mental practice" is once more rearing its logical head. Because of mind-body unity, the visualizing (imagining) of an act produces microscopic electrical representations — a mini-MUFS as it were! We know that it is not practice that makes perfect, but correct practice. Mental practice is not a substitute for practice, but an adjunct. It is not a means for developing the appropriate MUFS's, but to imprint them. Mental rehearsal or visumotor behavior rehearsal (VMBR) is for the highly skilled performer and has been reportedly used with success by members of the U.S. Olympic Ski Team.

The need to concentrate, i.e., to focus attention on the here and now, to have strategy clearly in mind, and to see and act upon tactical options are necessary ingredients of high-level performance.

In summary, there are always alternate routes to Rome; some are more direct than others. Training in signal detection and control, i.e., neuromuscular tension control, appears to be the most direct. It requires development of an internal resource which we all possess but do not always know how to use. There are shortcuts with the intent of "keeping one's cool" and to counteract the destructive effects of hyperarousal. Self-hypnosis and Autogenic Training are currently popular with Soviet trainers and athletes to promote relaxed performance. Meditating athletes report calmness and more self-confidence. In an unpublished study of a perceptual-motor task, Rimol compared the short and long-term effects of meditation versus non-meditation. The results were clear-cut in favor of the meditators.

The theme is "hanging loose"! Not too loose, but not too tight either! Trying too hard, the companion to overeffort, can upset the refined MUFS. Olympic sprint hopefuls instructed to relax the jaw and run with four-fifths effort were amazed to find their sprint times decreased. The advice for personal style is by all means to be competitive, aggressive, perfectionistic, and *loose*!

Personal testimonials and anecdotal records are legion, and there is support for any method that suggests abatement of stressors. Controlled studies are rare. Competitive badminton presents a special

challenge blending the highest levels of energy expenditure and finesse while operating within minimal safety margins of execution. How about some research on practice and enhancing performance?

References

- Carrington, Patricia. *Freedom in Meditation*. Garden City, NY: Anchor Press, 1974.
- Edwards, Marigold A. Tension control in education. In *Proceedings of the First Meeting of the American Association for the Advancement of Tension Control*, edited by F.J. McGuigan. Blacksburg, VA: University Publications, 1974.
- Jacobson, Edmund. *Self Operations Control*. Chicago: Foundation for Scientific Relaxation (55 E. Washington), 1964.
- Marshall, Michael Grant. How tension control relates to athletics. In *Proceedings of the Third Meeting of the American Association for the Advancement of Tension Control*, edited by F.J. McGuigan (Box 8005, Louisville, KY), 1976.
- McGuigan, F.J. *Thinking: Studies of Covert Language Processes*. Century Psychology Series. New York: Appleton-Century-Crofts, 1966.
- Morehouse, Lawrence E. and Gross, Leonard. *Maximum Performance*. New York: Simon & Schuster, 1977.
- Smith, Adam. Sport is a western yoga. *Psychology Today*, Oct. 1975.
- Suinn, Richard M. Body thinking: Psychology for olympic champs. *Psychology Today*, July 1976, pp. 38-43.

Championship Performance

JUDIANNE KELLY

Judianne Kelly is a badminton competitor of international renown. Her B.A. degree was received at the University of California at Long Beach. Her degree of competitive success includes: California State singles champion 1974-76; mixed doubles state champion 1973 and 1975-77; state ladies doubles champion 1971-72; ladies singles National Champion 1975; mixed doubles National Champion 1974-77; and member of the Womens Uber Cup team in 1977. She is currently teaching at Bell Junior High and coaches a CIF badminton team.

The manner in which an athlete is trained for competition is an individualized affair. The athlete should set up a conditioning program to meet the special and individualized needs of that sport. The problem is not conditioning the athlete to reach the highest skill level, but preparing the athlete psychologically.

In the past, many people believed that women should not participate actively in sports. Because of the current women's movement, this belief is rapidly changing, and females are learning how to become more aggressive, an important trait for success in badminton.

Growing up in the badminton world has given me a closeness I have never experienced with any other group of people. Perhaps this is because we are such a small group and badminton is still a little known sport. There are approximately 16 top men and 14 top women in the United States. They are "A" flight tournament players. One reason for this small number is the inaccessibility of facilities. Because of the limited number of clubs, we see the same people, not only at practice but also in tournaments. The top players spend at least four days a week training and practicing with a coach or another top player. This championship caliber is earned by commitment to hard work, motivation, perseverance and much suffering. Each player must set up his/her own program of training and own system of motivation.

I admire the athlete who is motivated by the sheer enjoyment of the movement experiences which occur while playing well. By pushing oneself to the highest achievement level, one becomes aware of the body in all its complexities. Continued enthusiasm and a good mental attitude are necessary to maintain top performance.

As one gets older, it is necessary to work even harder physically. If the older athlete works at keeping in shape, there should be no reason why the athlete cannot continue to compete over a long period of time with great success. The experienced player will usually

win over the inexperienced player because the former has learned self-discipline. What one may lack in physical ability is more than compensated for with craftiness and years of experience in tournament play.

Winning is an important part of the game, especially after having been a champion. Many people never make it to championship level because they lack persistence. They give up too soon because of continuous frustration and defeat. No one starts at the top! Everyone must climb the ladder! It is difficult when athletes get to the top because their title is constantly being challenged by those who have nothing to lose and everything to gain. The champion must be sure not to fall down in the areas of perseverance, self-discipline, tolerance of pain and commitment to stay on top. It is very difficult for a champion to keep all these things together, especially during top-level competition. How long the player maintains championship performance depends on all the above psychological and physiological factors.

Every athlete will, at some time, have unique psychological problems to overcome in reaching the desired championship level. Throughout the athlete's career, one will experience success and defeat in many of the above areas. By maintaining self-confidence and motivation, an athlete should be able to gain the desired success and continue to defend the title of champion.

Equipment Demands

ELIZABETH GREEN

Elizabeth Green received her B.A. degree from Whittier College, Whittier, California and her M.S. degree from the University of Southern California in Los Angeles. She is past chairperson of the Southern California Community Colleges Badminton Coaches Committee. For many years she has coached the Mt. San Antonio College Badminton Team, which took the state championships in 1977. Presently, Elizabeth Green is division chairperson for physical education at Mt. San Antonio College.

Badminton is truly a demanding sport that requires quickness and stamina. It requires an indoor facility and quality equipment.

If badminton is to gain status and popularity, there must be improvement in the quality and availability of equipment. Presently, there is top equipment for champion players and the usual Sunday sets for backyard enthusiasts. I know of no other sport where the equipment dilemma is greater. For novice players, school players and coaches, the following information on equipment may be helpful.

Racquets

Racquets range in price from a \$2.98 all-wood racquet to a \$30-\$60 graphite or carbonex racquet. Generally speaking, the better racquets are imports. In popular use, the top four are Carlton, Kawai, Vicort and Yonex. Some of these manufacturers have extensive lines of durable, well-balanced models that are well within the reach of most school budgets. Many years of teaching and coaching coed badminton have revealed that it is more economical in terms of cost and performance to purchase good equipment. Building a supply of good racquets is strongly recommended even if it means buying only four or five a year. If players are taught to respect and take care of good equipment, these racquets should last many years. The Yonex 4500 is an example of a good, durable metal racquet appropriate for class use. For team use, this writer recommends the 8000, the 8100, or the 9100. The 9100 has a wood head and is preferred by many coaches because the players seem to be more aware of the location of the racquet head in overhead stroking. The Carlton 3.7X is also a superior team racquet and a favorite of many players. These suggested racquets represent only a few of the available models. It is important that players and coaches experiment with a variety of racquets until just the right feel is discovered. Because racquets are available

in varied weights and grip sizes according to model and manufacturer, be specific when ordering. Gut or nylon stringing is a personal preference but considering cost, a top quality nylon seems economically advisable. Keep wood head racquets in presses when not in use and store metal racquets carefully to prevent damage to shaft and head.

With the increase in popularity of racquet sports, serious consideration should be given to the purchase of a stringing machine. Although it is an expensive piece of equipment, it reduces overall repair cost and relieves the necessity of maintaining an extensive inventory of racquets. In time, the stringing machine will pay for itself.

For broken strings during competition, an emergency string repair kit should be part of every coach's equipment. Prepared kits may be purchased or the individual awls, clippers and pliers can serve the same purpose. String repair is not difficult and players are usually delighted to learn how to fix their own racquets.

Shuttlecocks

The choice of quality shuttles is limited. There are nylon shuttles, which are expensive, and feathered shuttles, which are even more expensive. As of this writing, I can truly recommend no synthetic shuttle. They are too heavy, too lively and too fragile. They are also too large or too small and certainly too costly. With the cost of feathered shuttles, it is unthinkable to consider them for class use. The Carlton nylon is probably the only acceptable substitute for the traditional shuttle and it falls short of the satisfactory mark in durability, especially if the classes are coed. If you order this shuttle, specify blue band for medium speed. The cost is approximately \$6.50-\$7.00 per dozen. There is a great deal of money to be made if a company will develop a satisfactory synthetic shuttle; one that is of similar size and weight, has a true flight, and is long-lasting.

Since the purists do not endorse a nylon shuttle with the ABA approval for tournament play, feathered shuttles should be used by all competitive teams in high school and college. Not supplying ABA-approved shuttles to school teams would be a disservice to the better players. Again, shuttles should be selected on the premise that reasonably good quality equipment will pay dividends in performance and economy. For the past several years, the California Community Colleges have selected the HL Champion as their tournament shuttle and have been pleased with the results. Almost without exception, the member colleges use the HL as the official match bird as well. The October 1977 price list indicates the HL Champion at \$11.30 per dozen.

Keeping the shuttles moist is essential to maintaining optimal

speed. To preserve the shuttles, put them in shuttle tubes, then wrap the tubes in a damp towel covered with plastic and store in a refrigerator 24 hours before use. Remove shuttles from the wrappings and tubes 2 hours before the match begins.

Nets

There are several official nets available at reasonable prices. The particular specifications which make a net official and long-lasting are:

1. $\frac{3}{4}$ inch, 100 percent nylon or cotton mesh
2. Net dimensions, 21' x 2 $\frac{1}{2}$ '
3. Cotton rope through top binding
4. Heavy canvas or nylon top binding
5. Taped bottom and sides
6. Color: netting brown, tape white

This type of net is available in different degrees of quality and will cost up to approximately \$22. It may be purchased from well-known sporting goods manufacturers or from specialized netting companies.

Equipment Purchase

School districts that do quantity purchasing have the advantage of bid and volume prices. This is only an advantage however if the desired quality is bid and purchased. Ordering low bids does not necessarily insure the meeting of bid specifications. Thoroughly familiarizing yourself with specific equipment is essential to effective purchasing. Use the local sporting goods stores for this purpose and use the wholesale or marketing firms for your quantity buying. Sometimes as much as 30 percent can be saved if you really know your product. Useful information on purchase and care of equipment, as well as new equipment, may often be found in the various badminton publications and newsletters.

Badminton Rules Summary

CHARLOTTE ACKERMAN
Talcot Junior High School
West Hartford, Connecticut

Court. See diagram on pages 140-141.

Net. 5 feet 1 inch at posts, and 5 feet at center.

Start of Play. Before starting the game, the opponents toss a coin (or spin a racket) with the winner choosing

- a) to serve first/to receive first, or
- b) the side.

In subsequent games, the winning side serves first.

Scoring. A player must be serving to score points. When the server commits a fault, his/her turn of service is over. When the receiver commits a fault, the server is given a point.

A game consists of: 11 points. . . Ladies Singles
15 points. . . Mens Singles & All Doubles

If the game is tied at a certain score, it may be extended by the team or player reaching that score first. This is called *setting*. If set, the score becomes love-all and play continues as before until the set score is reached.

	Score Set At	Points Needed To Win
11 point game	9 all	3
	10 all	2
15 point game	13 all	5
	14 all	3

A *match* consists of 2 out of 3 games. Players change ends after each game. In a third game, players also change at the halfway point (after either 6 or 8 points).

Serving. The first serve of the game is always made from the right service court.

In both singles and doubles, a player continues to serve (alternating service courts) as long as the player scores points.

In singles, the player will serve from the right service court when the player's score is 0 or even; from the left service court when the player's score is odd.

In doubles, partners will be in the service courts where they began the game when their score is 0 or even; in the opposite service courts when their score is odd.

In doubles, each partner is given a turn of service, with the player in the right court serving first. (Exception: The team serving first in the game has only one partner's turn of service.)

If the server completely misses the shuttle on the serve, the serv-

er may serve again.

A serve may not be delivered until the receiver is ready. If the receiver plays the serve, the receiver is considered ready.

During the serve, it is a fault if:

- a) the shuttle is contacted above the server's waist or the racket head is above any part of the hand
- b) the shuttle does not fall into the diagonally opposite service court
- c) some part of both feet of the server and receiver are not in contact with the appropriate court (inside the boundary lines) until the shuttle is contacted by the server
- d) either the server or receiver feints or balks

General Play. A shuttle falling on the line is considered good.

A shuttle which touches and passes over the net is in play (on the serve and any other shot).

It is considered a fault if:

- a) the shuttle fails to pass over the net or lands outside the boundary lines
- b) the shuttle contacts the walls, ceiling, player or the player's clothes
- c) the shuttle passes through or under the net
- d) the shuttle is hit more than once or is momentarily caught and slung
- e) the player touches the net
- f) the player reaches across the net to contact the shuttle (following through across the net is allowed)
- g) the player obstructs an opponent or invades an opponent's court.

Badminton Bibliography

Revised by MARY WYLIE FORD

Winthrop College
Rock Hill, South Carolina

Books

- Annarino, Anthony A. *Badminton, Individualized Instruction Program*. Englewood Cliffs, NJ: Prentice-Hall, 1973. \$2.75.
- Bloss, Margaret Varner and Brown, Virginia A. *Badminton*. Dubuque, IA: Wm. C. Brown Co., 1975. \$2.50.
- Burris, Barbara and Olson, Arne. *Badminton*. Boston: Allyn & Bacon, 1974. \$1.95.
- Canadian Badminton Association *Handbook*. 75¢. Also *Level I Coaching Manual*, \$2.50 and *Level II Coaching Manual*, \$3.50. 333 River Road, Ottawa, Ontario, Canada.
- Davis, Pat. *The Badminton Coach: A Manual for Coaches, Teachers, and Players*. New Rochelle, NY: Sportsshelf, 1976. \$15.25.
- Johnson, M.L. *Badminton*. Philadelphia: W.B. Saunders Co., 1974. \$3.
- Poole, James. *Badminton*. Pacific Palisades, CA: Goodyear Publishing Co., 1973. \$3.95.
- Rogers, Wynn. *Advanced Badminton*. Dubuque, IA: Wm. C. Brown Co., 1970. \$2.50.

Articles, Rules, Magazines and Instructional Materials

- The Badminton Gazette*. Pat Davis, ed. 12a Palmerston Rd., Buckhurst Hill, Essex, England.
- "Badminton Rules." Dayton Racquet Co., Arcanum, OH 45304. Free.
- Collins, Rex. Good service is key to scoring. *Badminton U.S.A.* 35: Nov. 1975, 12.
- Collins, Rex. The smash! *Badminton U.S.A.* 35: Feb. 1976, 14.
- Daves, Marise. Badminton drills. *Woman Coach* 2: March-April 1976, 12, 56-57.
- Grice, Tony and Whaley, Gary. Beginning badminton in high school. *Badminton U.S.A.* 35: Jan. 1976, 25.
- Guide to Better Badminton*. 16 pp. Ashaway Products, Inc., Ashaway, RI 02804. Free.
- Racquets Canada*. 643 Yonge St., Toronto, Ontario, Canada.
- U.S. Badminton Association. "Official Badminton Playing Rules." P.O. Box 237, Swartz Creek, MI 48473. 50¢.
- Van Praag, Jack. Badminton bibliography-1976. *Badminton U.S.A.* 35: March 1976, 27-28.

Badminton Visual Aids

Revised by JUDIANNE KELLY

Bell Junior High School
Garden Grove, California

Prices are subject to change. Numbers in parentheses refer to the film distributors listed at end of article. Evaluation of films: E-Excellent, VG-Very Good.

16mm Films

Advanced Badminton. 19 min., sound, color, sale \$225 (1). Wynn Rogers explains advanced techniques and strategy (e.g., use of deception and differences and approach in playing singles, doubles and mixed doubles) as champion players perform. Badminton of international caliber is played by men and women of different generations. E.

All England World Championship Singles Finals. 1967, 60 min., sound, b&w, rental \$25 (4). An exciting final match between Judy Hashman (USA) and Noriko Takagi (Japan). A brief preface describing points of special interest to anticipate in the film. E.

Badminton Fundamentals. 12 min., sound, color, sale \$140 (1). Basic skills for beginners, including footwork, grips, service, and forehand and backhand strokes. Skills are performed by young and old, females and males, champions and beginners and in normal speed and slow motion. VG.

Badminton Sound Films. Color, sale \$190/ea. or \$570/set of 3 (2). National champions Cindy Baker, Judianne Kelly, Don Paup, Chris Kinard and Charles Coakley demonstrate badminton fundamentals, strategy elements and exercises. Filmed by the Athletic Institute. Consultants Dr. Breen and Dr. Paup. Grip, footwork and serves, 15.6 min., BA-1R; basic strokes, 17 min., BA-2R; basic strategy and drills, 17.6 min., BA-3R. E.

Selected Highlights of the 1969 U.S. Open Amateur Championships. 40 min., silent, 12" reel, rental \$10 (5). Northwestern State College, Natchitoches, LA. Semifinals: Ladies' Singles - Denmark vs. Sweden; Men's Singles - Indonesia vs. Japan. Advanced. E.

Selected Highlights of the 1973 U.S. Open Amateur Championships. 22 min., sound, color, free, (6). Swedish Eva Twedberg and Canadian Barbara O'Brien show excellent strokes and game strategy. American Jim Poole and Don Paup play doubles against the English team of Tredgett and Talbot in an exciting three-game upset. E.

Loop Films

Badminton. Sale \$24.95/cartridge or \$149.70/set of six (3). Unless otherwise specified, technicolor cartridges will be shipped. To order Kodak cartridges, substitute the letter "K" for "T" in the order number. Consultant James Poole, Dominguez Hills State College, CA. The serve, 1201T-9; overhead forehand strokes, 1202T-9; overhead backhand strokes, 1203T-9; underhand net strokes, 1204T-9; drives and round the head strokes, 1205T-9; footwork, 1206T-9 and the complete set of six cartridges, 1200T-9. VG.

Badminton Sound Super 8 Cassettes. 1974, color, sale \$140/cassette or \$420/set of three (2). Same as above *Badminton Sound Films* only in cassettes. Special care has been taken in filming this production to show both racket and shuttle clearly. These illuminated films are dramatic camera angles, including overhead shots which dissolve into court diagrams to clearly illustrate game strategy. Grip, footwork, serves BA-1C; basic strokes BA-2C; basic strategy and drills, BA-3C. E.

Bulletin Board Materials

Badminton-Courts, Scoring, Strokes. Displays scoring in both doubles and singles, court differences, and the need to use a variety of strokes. Available from Easy Post, Box 425, Normal, IL 61761. \$1.50.

Badminton Wall Charts. Diagrams of court, rules and playing principles as to court position. Available from Diagram Visual Information, Ltd., 41 King St., London, WC2E8JS, England.

Distributors

1. Aims Instructional Media Services, Inc., P.O. 1010, Hollywood, CA 90028.
2. AAHPER Educational Media Services, 1201 16th St., N.W., Washington, DC 20036.
3. Champions on Film, 745 State Circle, Ann Arbor, MI 48104.
4. J. Frank Devlin, RFD #2, Dolfield Rd., Owings Mills, MD 21117.
5. David Ogata, 3919 Alla Rd., Los Angeles, CA 90066.
6. Travelers Insurance Companies, One Tower Square, Hartford CT 06115.

LAWS OF BADMINTON*

(As adopted by the International Badminton Federation and the United States Badminton Association)

Changes in rules are indicated by shading, rewording by a check (✓).

1. Court. (a) The court shall be laid out as in Diagram A (except in the case provided for in paragraph b of this law) and to the measurements there shown, and shall be defined preferably by white or yellow lines, or if this is not possible, by other easily distinguishable lines, 1½ inches wide.

In marking the court, the width (1½ inches) of the center lines shall be equally divided between the right and left service courts; the width (1½ inches each) of the short service line and the long service line shall fall within the 13-foot measurement given as the length of the service court; and the width (1½ inches each) of all other boundary lines shall fall within the measurements given.

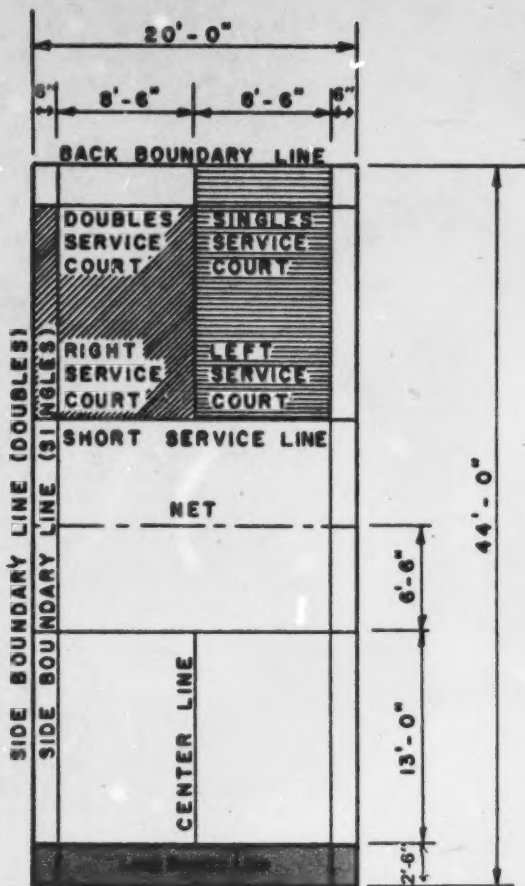
(b) Where space does not permit the marking out of a court for doubles, a court may be marked out for singles only as shown in Diagram B. The back boundary lines become also the long service lines, and the posts, or the strips of material representing them as referred to in Law 2, shall be placed on the sidelines.

(c) The height of a court for international competition play shall be a minimum of 26 feet or 8 metres from the floor over the full court. This height shall be entirely free of girders and other obstructions over the area of the court.

There shall also be at least 4 feet or 1.25 metres clear space surrounding all the outer lines of the court, this space being also a minimum requirement between any two courts marked out side by side.

2. Posts. The posts shall be 5 feet 1 inch in height from the surface of the court. They shall be sufficiently firm to keep the net strained as provided in Law 3, and shall be placed on the side boundary lines of the court. Where this is not practicable, some method must be employed for indicating the position of the side boundary line where it passes under the net, e.g., by the use of a thin post or strip of material not less than 1½ inches in width, fixed to the side boundary line and rising vertically to the net cord. Where this is in use on a court marked for doubles, it shall be placed on the side boundary line of the doubles court irrespective of whether singles or doubles are being played.

*Copyrighted by the United States Badminton Association. Reprinted by permission. See page 151 for statement from USBA.



138

Diagram A

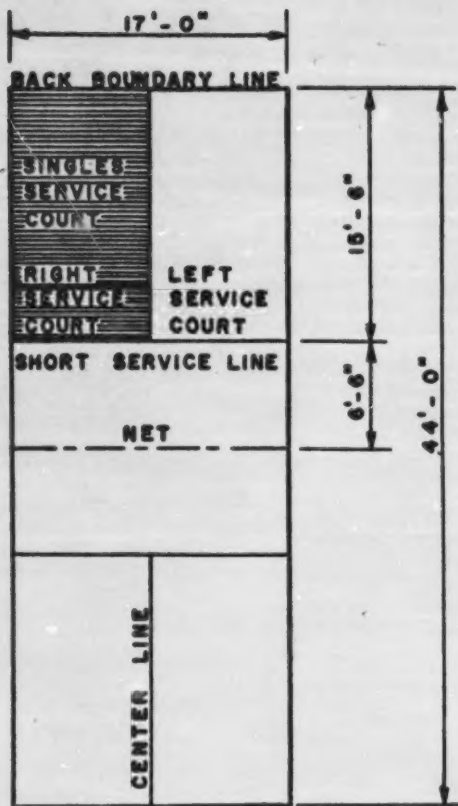


Diagram 8

3. Net. The net shall be made of fine natural cord or artificial fibre of a dark colour and an even thickness not exceeding 5/8 inch to 3/4 inch (1.5 to 2 cm.) mesh. It shall be firmly stretched from post to post, and shall be 2 feet 6 inches in depth. The top of the net shall be 5 feet in height from the floor at the center, and 5 feet 1 inch at the posts, and shall be edged with a 3-inch white tape doubled and supported by a cord or cable run through the tape and strained over and flush with the top of the posts.

4. Shuttle. A shuttle shall weigh from 73 to 85 grains, and shall have from 14 to 16 feathers fixed in a cork of 1 inch to 1-1/8 inches in diameter. The feathers shall be from 2 1/4 to 2 3/4 inches in length from the tip to the top of the cork base. They shall have from 2-1/8 to 2 1/2 inches spread at the top and shall be firmly fastened with thread or other suitable material.

Subject to there being no substantial variation in the general design, pace, weight, and flight of the shuttle, modifications in the above specifications may be made, subject to the approval of the national organization concerned, (a) in places where atmospheric conditions, due either to altitude or climate, make the standard shuttle unsuitable; or (b) if special circumstances exist which make it otherwise expedient in the interests of the game.

5. Pace. The shuttle shall be of correct speed. The governing body or association is final authority as to the

(Carlton Nylon Shuttles—Tournament and International grades—and RSL Plastic Shuttles have been approved for all tournaments except adult "Open" tournaments for which a \$5 sanction fee is charged; Closed and Open ABA Amateur Championships; and U.S. National Junior Championships.)

A shuttle shall be deemed to be of correct pace if, when a player of average strength strikes it with a full underhand stroke from a spot immediately above one back boundary line in a line parallel to the sidelines, and at an upward angle, it falls not less than 1 foot and not more than 2 feet 6 inches short of the other back boundary line.

5. Players. (a) The word "player" applies to all those taking part in a game.

(b) The game shall be played, in the case of the doubles game, by two players on a side, and in the case of the single game, by one player on a side.

(c) The side for the time being having the right to serve shall be called the "in" side, and the opposing side shall be called the "out" side.

6. The Toss. Before commencing play, the opposite sides shall toss, and the side winning the toss shall have the option of (a) serving

first; or (b) not serving first, or (c) choosing ends. The side losing the toss shall then have choice of any alternative remaining.

7. Scoring. (a) The doubles and men's singles game consists of 15 or 21 points, as may be arranged. Provided that in a game of 15 points, when the score is 13-all, the side which has first reached 13 has the option of "setting" the game to 5, and that when the score is 14-all, the side which first reached 14 has the option of "setting" the game to 3. After a game has been "set," the score is called "love-all," and the side which first scores 5 or 3 points, according as the game has been "set" at 13-all or 14-all, wins the game. In either case the claim to "set" the game must be made before the next service is delivered after the score has reached 13-all or 14-all. Provided also that in a game of 21 points the same method of scoring be adopted, substituting 19 and 20 for 13 and 14. (In all Championship play, 15 points is the official game, rather than 21.)

(b) The women's singles game consists of 11 points, provided that when the score is "9-all" the player who first reached 9 has the option of "setting" the game to 3, and when the score is "10-all" the player who first reached 10 has the option of "setting" the game to 2.

(c) A side rejecting the option of "setting" at the first opportunity shall not thereby be debarred from "setting" if a second opportunity arises.

(d) In handicap games, "setting" is not permitted.

8. The opposing sides shall contest the best of three games, unless otherwise agreed. The players shall change ends at the commencement of the second game and also of the third game, if any. In the third game the players shall change ends when the leading score reaches —

- (a) 8 in a game of 15 points,
- (b) 6 in a game of 11 points,
- (c) 11 in a game of 21 points,

or, in handicap events, when one of the sides has scored half the total number of points required to win the game (the next highest number being taken in the case of fractions). When it has been agreed to play only one game, the players shall change ends as provided above for the third game.

If, inadvertently, the players omit to change ends as provided in this Law at the score indicated, the ends shall be changed immediately the mistake is discovered, and the existing score shall stand.

9. Doubles Play. (a) It having been decided which side is to have the first service, the player in the right-hand service court of that side commences the game by serving to the player in the service court diagonally opposite. If the latter player returns the shuttle before it

touches the ground, it is to be returned by one of the "in" side, and then returned by one of the "out" side, and so on, until a fault is made or the shuttle ceases to be "in play" (see paragraph b). If a fault is made by the "in" side, its right to continue serving is lost, as only one player on the side beginning a game is entitled to do so (see Law 11), and the opponent in the right-hand service court then becomes the server; but if the service is not returned or the fault is made by the "out" side, the "in" side scores a point. The "in" side players then change from one service court to the other, the service now being from the left-hand service court to the player in the service court diagonally opposite. So long as a side remains "in," service is delivered alternately from each service court into the one diagonally opposite, the change being made by the "in" side when, and only when, a point is added to its score.

(b) The first service of a side in each inning shall be made from the right-hand service court. A "Service" is delivered as soon as the shuttle is struck by the server's racket. The shuttle is thereafter "in play" until it touches the ground, or until a fault or "let" occurs, or except as provided in Law 19. After the service is delivered the server and the player served to may take up any positions they choose on their side of the net, irrespective of any boundary lines.

10. The player served to may alone receive the service, but should the shuttle touch, or be struck by, his partner the "in" side scores a point. No player may receive two consecutive services in the same game, except as provided in Law 12.

11. Only one player of the side beginning a game shall be entitled to serve in its first innings. In all subsequent innings each partner shall have the right, and they shall serve consecutively. The side winning a game shall always serve first in the next game, but either of the winners may serve and either of the losers may receive the service.

12. If a player serves out of turn, or from the wrong service court (owing to a mistake as to the service court from which service is at the time being in order), and his side wins the rally, it shall be a "let," provided that such "let" be claimed and allowed, or ordered by the umpire, before the next succeeding service is delivered.

If a player of the "out" side standing in the wrong service court is prepared to receive the service when it is delivered, and his side wins the rally, it shall be a "let," provided that such "let" be claimed and allowed, or ordered by the umpire, before the next succeeding service is delivered.

If in either of the above cases the side at fault loses the rally, the mistake shall stand and the players' position shall not be corrected.

Should a player inadvertently change sides when he should not do so, and the mistake not be discovered until after the next succeeding service has been delivered, the mistake shall stand, and a "let" cannot be claimed or allowed, and the players' position shall not be corrected.

13. Singles Play. In singles, Laws 9 to 12 hold good except that —

(a) The players shall serve from and receive service in their respective right-hand service courts only when the server's score is 0 or an even number of points in the game, the service being delivered from and received in their respective left-hand service courts when the server's score is an odd number of points. Setting does not affect this sequence.

(b) Both players shall change service courts after each point has been scored.

14. Faults. A fault made by a player of the side which is "in" puts the server out; if made by a player whose side is "out," it counts a point to the "in" side. It is a fault —

(a) If in serving, the shuttle at the instant of being struck is higher than the server's wrist, or if at the instant of the shuttle being struck the shaft of the racket is not pointing in a downward direction to such an extent that the whole of the head of the racket is discernibly below the whole of the server's hand holding the racket.

(b) If in serving, the shuttle does not pass over the net, falls into the wrong service court (i.e., into the one not diagonally opposite to the server), or falls short of the short service line, or beyond the long service line, or outside the side boundary lines of the service court into which service is in order.

(c) If the server's feet are not in the service court from which service is at the time being in order, or if the feet of the player receiving the service are not in the service court diagonally opposite until the service is delivered (see Law 16).

(d) If before or during the delivery of the service any player makes preliminary feints or otherwise intentionally balks his opponent, or if any player deliberately delays serving the shuttle or in getting ready to receive it, so as to obtain an unfair advantage.

(e) If, either in service or play, the shuttle falls outside the boundaries of the court, or passes through or under the net, or fails to pass the net, or touches the roof or side walls or the person or dress of a player. (A shuttle falling on a line shall be deemed to have fallen in the court or service court of which such line is a boundary.)

(f) If the shuttle "in play" is struck before it crosses to the striker's side of the net. (The striker may, however, follow the shuttle over the net with his racket in the course of his stroke.)

(g) If, when the shuttle is "in play" a player touches the net or its supports with racket, person, or dress.

(h) If the shuttle is held on the racket (i.e., caught or slung) during the execution of a stroke; or if the shuttle is hit twice in succession by the same player with two strokes; or if the shuttle is hit by a player and his partner successively.

(i) If, in play, a player strikes the shuttle (unless he thereby makes a good return), or is struck by it, whether he is standing within or outside the boundaries of the court.

(j) If a player obstructs an opponent.

(k) If Law 16 is transgressed.

General

15. The server may not serve until his opponent is ready, but the opponent shall be deemed to be ready if a return of the service is attempted.

16. The server and the player served to must stand within the limits of their respective service courts (as bounded by the short and long service, the center and sidelines), and some part of both feet of these players must remain in contact with the surface of the court in a stationary position until the service is delivered. A foot on or touching a line in the case of either the server or the receiver shall be held to be outside his service court (see Law 14c).

The respective partners may take up any position, provided they do not unsight or otherwise obstruct an opponent.

17. (a) If, in the course of service or rally, the shuttle touches and passes over the net, the stroke is not invalidated thereby. It is a good return if the shuttle having passed outside either post, drops on or within the boundary lines of the opposite court. A "let" may be given by the umpire for an unforeseen or accidental hindrance.

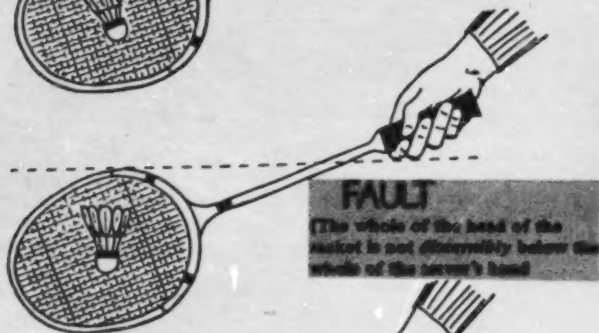
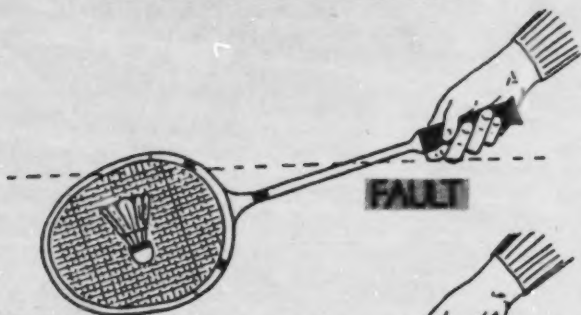
(b) If, in service, or during a rally, a shuttle, after passing over the net, is caught in or on the net, it is a "let."

(c) If the receiver is faulted for moving before the service is delivered, or for not being within the correct service court, in accordance with Laws 14c or 16, and at the same time the server is also faulted for a service infringement, it shall be a "let."

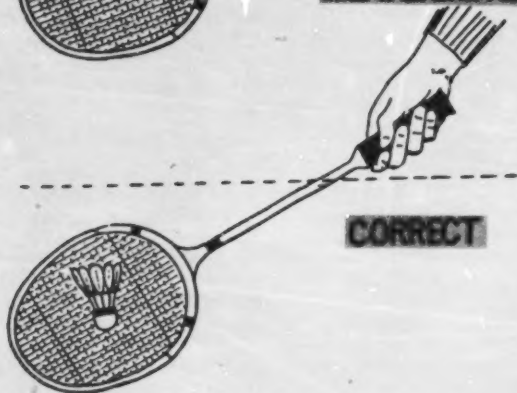
(d) When a "let" occurs, the play since the last service shall not count, and the player who served shall serve again, except when Law 12 is applicable.

18. If the server, in attempting to serve, misses the shuttle, it is not a fault; but if the shuttle is touched by the racket, a service is thereby delivered.

LAW 14—DELIVERY OF SERVICE



FAULT
(The whole of the head of the racket is not directly below the whole of the server's hand)



CORRECT

Position of Hand and Racket at the instant of striking the shuttle.

19. If when in play the shuttle strikes the net and remains suspended there, or strikes the net and falls towards the surface of the court on the striker's side of the net, or hits the surface outside the court and an opponent then touches the net or shuttle with his racket or person, there is no penalty, as the shuttle is not *then* in play.

20. If a player has a chance of striking the shuttle in a downward direction when quite near the net, his opponent must not put up his racket near the net on the chance of the shuttle rebounding from it. This is obstruction within the meaning of Law 14j. A player may, however, hold up his racket to protect his face from being hit if he does not thereby balk his opponent.

21. It shall be the duty of the umpire to call "fault" or "let" should either occur, without appeal being made by the players, and to give his decision on any appeal regarding a point in dispute, if made before the next service, and also to appoint linesmen and service judges at his discretion. The umpire's decision shall be final, but he shall uphold the decision of a linesman or serving judge. This does not preclude the umpire also from faulting the server or receiver. Where, however, a referee is appointed, an appeal shall lie to him from the decision of an umpire on questions of law only.

22. Continuous Play – Play shall be continuous from the first service until the match is concluded, except that

(a) In the International Badminton Championships and in the Ladies' International Badminton Championships there shall be allowed an interval not exceeding five minutes between the second and third games of a match.

(b) In countries where conditions render it desirable, there shall be allowed, subject to the previously published approval of the National Organization concerned, an interval not exceeding five minutes between the second and third games of a match, either singles or doubles or both; and

(c) When necessitated by circumstances not within the control of the players, the umpire may suspend play for such a period as he may consider necessary. If play is suspended, the existing score shall stand and play be resumed from that point. Under no circumstances shall play be suspended to enable a player to recover his strength or wind, or to receive instruction or advice. Except in the case of an interval provided for above, no player shall be allowed to receive advice during a match or leave the court until the match is concluded without the umpire's consent. The umpire shall be the sole

judge of any suspension of play and he shall have the right to disqualify an offender. (In the U.S., at the request of any player, a five-minute rest period between the 2nd and the 3rd game will be granted, in all events. Such a rest period is mandatory for all Junior Tournaments.)

INTERPRETATIONS

1. Any movement or conduct by the server that has the effect of breaking the continuity of service after the server and receiver have taken their positions to serve and to receive the service is a preliminary feint. For example, a server who, after having taken up his position to serve, delays hitting the shuttle for so long as to be unfair to the receiver, is guilty of such conduct. (See Law 14d.) Note—U.S. interpretation is: it is a fault if the serve is not delivered in five seconds from the time that both server and receiver have taken their stance.
2. It is obstruction if a player invades an opponent's court with racket or person in any degree except as permitted in Law 14f (see Law 14j).
3. Where necessary on account of the structure of a building, the local Badminton Authority may, subject to the right of veto by its National Organization, make bylaws dealing with cases in which a shuttle touches an obstruction.

4. There shall be a maximum of five (5) minutes allowed during a match for equipment repair.
5. There shall be only one injury time out allowed per match (per person) and a maximum of ten (10) minutes allowed for such injuries. If injured a second time and player is unable to continue playing immediately, match must be defaulted.
6. If the shuttlecock disintegrates (cork and feathers separate) during a rally, where the cork strikes the floor shall determine the winner of the rally.
7. Under Rule 16 which reads "a foot on or touching a line is the case of either the server or the receiver shall be held to be outside his service court". If the foot is raised in such a manner that a part of it is over the line but not touching it, it is not a fault. The line has actually to be touched in order to create a fault.
8. U.S. rules permit adjusting the shuttle to obtain correct speed. Tournament referee or chairman is final authority as to need for adjustment.

B. Certain international tourney awards are approved for use in all tournaments except:

- a. Adult "Open" tournaments;**
- b. USBA National Championships—Closed or Open;**
- c. USBA National Junior Championships.**

CLARIFICATION OF RULES—NAGWS Badminton Guide Committee

Law 12, Paragraph 1. Serving out of turn from the wrong service court may mean (a) the correct server delivers a serve from the wrong service court, or (b) this wrong server delivers a serve from either the correct or incorrect service court.

Law 12, Paragraph 2. "Takes the serve" means receives the serve.

Law 12, Paragraph 4. The procedure given for a player inadvertently changing sides when he should not do so, under the conditions noted, also applies should a player fail to change sides when he should do so, under the same conditions.

USBA Statement

Although the preceding are the rules as of this date, these rules may change from year to year to some extent. Hence, anytime after 1978 and before release of the 1980 *NAGWS Guide*, to assure yourself that you are dealing with the up-to-date rules, you should secure them from:

United States Badminton Association
P.O. Box 237
Swartz Creek, MI 48473

Squash

Introduction. *Jane Millspaugh* 154

COMMITTEES AND ARTICLES

NAGWS Squash Guide Committees.	155
Fit for Squash. <i>Mariann Greenberg</i>	157
A Winner-Error Chart for Squash <i>Ann Batchelder</i>	162
The Doubles Game <i>Mary O'Toole</i>	165
Squash Bibliography Revised by <i>Caryl M. Newhof</i>	171
Audiovisual Material	172

RULES

United States Squash Racquets Association Official Singles Rules	173
---	-----

Introduction

This is an exciting time to be involved with squash as its popularity is increasing each year. More women are becoming involved at the secondary and college level. Many new opportunities to play are opening up as traditionally male institutions where squash is already popular become coeducational. Now the new changes in the ball add to the fun of the sport and the length of the playing season. It's a great activity for both fitness and enjoyment.

Jane Millspaugh
Chairperson, NAGWS Squash Guide Committee

151

NAGWS SQUASH GUIDE COMMITTEE*
1976-1978

JANE MILLSPAUGH, *Chairperson*, Ferris Athletic Center, Trinity College, Hartford, CT 06106

MARIANN GREENBERG, *Chairperson-elect*, Bedford Park Blvd. West, Herbert H. Lehman College, Bronx, NY 01468

ANN BATCHELDER, Wellesley College, Wellesley, MA 02181

CARYL NEWHOF, Scott Gymnasium, Smith College, Northampton, MA 01060

LINDA WILKINS, Williams College, Williamstown, MA 01267

NAGWS SQUASH GUIDE COMMITTEE
1978-1980

MARIANN GREENBERG, *Chairperson*, Bedford Park Blvd. West, Herbert H. Lehman College, Bronx, NY 01468

*The current *Guide* was prepared by the 1976-78 Committee. The 1980-82 *Guide* will be prepared by the 1978-80 Committee.



Jane Millspaugh



Caryl M. Newhof



Ann S. Batchelder

Fit for Squash

MARIANN GREENBERG

Mariann Greenberg received her B.S. degree from Long Island University, Brooklyn, N.Y. and her M.A. from Teachers College, Columbia University, N.Y. She is a full-time lecturer at Herbert H. Lehman College, Bronx, N.Y. Mariann has been active in the USWSRA where she has served on the National Ranking Committee and is presently secretary of the organization. Mariann was a member of the 1977 Silver Jubilee team which toured Great Britain.

A competitive squash player must rely on endurance to persevere, agility and flexibility to cover the court in an efficient manner, and body-racquet control to strike the ball accurately and successfully. Defining endurance is difficult since it has at least two meanings. Muscular endurance usually refers to the ability to overcome moderate resistance for an extended period of time. Cardiovascular endurance usually refers to heart and lung capacity and their rate of recovery from strenuous exercise. Both muscular and cardiovascular endurance are minimum requirements for the competitive squash player. The individual must have the capacity to play consecutive points in an all-out fashion and still be fresh at 17-17 in the fifth game. Agility and flexibility refer to the competence of the individual to switch directions efficiently and quickly. Effective court coverage is dependent on these qualities. To be complete, squash players must use their physiological abilities in conjunction with an understanding of stroke production and strategy to achieve both body and racquet control; that is, getting to the right place efficiently and then selecting and executing the proper stroke.

Becoming fit for squash involves three areas of preparation: pre-season conditioning, pre-practice warm-up and body-racquet control.

Pre-Season

The goal of pre-season conditioning is to assist in the development of endurance and strength which will prepare the body for the season ahead. To accomplish this, it is essential that exercise routines be established and performed with regularity.

Cardiovascular Endurance. Wind sprints are favored over jogging; however, for the wind sprints to be effective, a program that begins with and encompasses jogging is necessary. The squash player must jog a sufficient distance to raise the heart rate to at least 140 beats per minute and maintain that level for a period of time. One should

begin by covering a distance of a mile, running as much of the distance as possible and walking when necessary. This should be repeated daily until the full mile can be run in nine minutes or less. The distance should be increased to a mile and a half and repeated daily until one can run the distance in fifteen minutes or less. Then this distance should be increased to two miles, until it can be accomplished in 21 minutes or less. One should continue to run at least two miles a day.

The quickness of squash requires that sprints be incorporated into the workout. Recommended sprints are 40 yards with a 30-second rest interval. Six such sprints equal one set. The goal is to perform a minimum of three sets. Once this is accomplished, one should decrease the rest intervals to 15 seconds while increasing the number of sets. The player should be cautioned not to do too much too soon. One's system needs an opportunity to adapt to the changes in its activity pattern.

Muscular Endurance. The abdominal area should be strengthened for squash. The recommended exercises for this area are bent knee sit-ups and leg raises.

Pre-court warm-up

Warm-ups are necessary prior to entering a squash court. The players want to gradually ease their bodies into the activity, raising the body temperature and slowly stretching the muscles and ligaments. Conscientious warm-up will allow the player to function at a high level with less likelihood of injury. The following warm-up routine is recommended. *Arm circles*—standing in a straddle position with the arms extended perpendicularly out to the side, the player should make three sets of forward circles (small, medium and large) with eight to a set. This is to be repeated, going backward. *Toe touches*—standing erect with feet shoulder-width apart and hands at their sides, the players should reach down and try to touch the floor between their feet without bending their knees, and hold. The action is not a bouncing movement. The players should return to the starting position and extend their arms overhead, reaching high. The entire sequence should be repeated a minimum of eight times. *Achilles tendon stretch*—standing facing the wall with arms extended and palms against the wall at face level, the players should take small steps back until the heels can no longer be kept on the ground. The heels should be pressed down gently and the position held. The distance from the wall should be increased, being cautious not to go farther than is comfortable at first. *Hurdle stretch*—the player should assume a hurdler's position on the floor; the right leg is extended in front and the left leg is bent and drawn up at the side as far as possible. The right arm is extended behind

the body and to the right side with the palm on the floor for support. One should lean the trunk and head back and to the right, pulling diagonally away from the bent knee until some discomfort is experienced. This position should be held; then the entire sequence should be repeated. Returning to the starting position, the player should reach toward the right foot with both hands and lower the head and trunk toward the knee until some discomfort is felt. This position should be held for five seconds. Leg positions should be restored (left extended, right bent and left arm supporting) and both exercises should be repeated. Bouncing and jarring the body should be avoided.

The author has tried to give exercises that will prepare the player for the season ahead. In many cases the number of repetitions and sets necessary to complete the routine have been omitted purposely. Each person begins at a different level and has individual needs; time may also be a factor in the extent of pre-game warm-ups. However, one should work to increase the number of repetitions while decreasing or maintaining the time required to complete the routine. The important thing is to have a routine that involves major muscle groups and is performed conscientiously before a match.

Body-Racquet Control

Improving movement patterns as well as working on ability, endurance and flexibility is the next task. If the player can become familiar with the dimensions of the squash court, then excess movement will be reduced. The first routine is called a "star" (Figure 1). With a racquet, the player starts at the "T," takes no more than three steps, stretches and swings at an imaginary drop shot on the left front wall. Return to the "T" moving backward with the legs bent and repeat, going for a drop shot on the right front wall. From the "T," take no more than two steps and move to the left side wall; swing at a rail and return to the "T." Repeat to the right side wall.

The player should be able to see the front wall, since that is where the ball comes from, while stepping and swinging at the imaginary ball. The player should go to the left back wall with no more than two steps and either swing at a high lob or attempt a boast. The player should return to the "T" and repeat to the right back corner. It is important in the performance of this and other related exercises to gradually lower or raise one's body, not wasting precious moments arriving, bending, extending and hitting. It is also necessary to actually imagine a ball in each designated area because position matters. The goal of this drill would be to start with one "star," rest for 30 seconds, and repeat, trying to increase the number of consecutive "stars." Three "stars" equal one set. The player should rest one minute and then repeat. The number of sets should

be increased and rest intervals reduced to 45 seconds. "Stars" have been equated to points; if one can do 10 hard "stars," one should be able to play 10 consecutive points in an all-out manner. Do not sacrifice movement to increase the number of "stars"—efficiency is sought. The court has been reduced to steps in specific directions and racquet control combined with court coverage and the ability to endure long points.

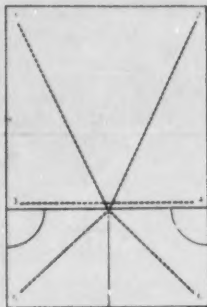


Figure 1. Star drill

The following drill may be done alone but are easier with a partner.

Drill #1. The rail stroke (down the line) is fundamental to a squash player's game. A good rail must bounce between the red line and the back wall. Player A hits a rail drive and attempts to return to the "T." Player B returns with another rail drive and tries to move to the "T." Players alternate rails and return to the "T." Only one side of the court is used. This should be done on both the forehand and backhand sides. If the player is running around the opponent, greater depth is needed on rail shots.

Drill #2. This time rails should be alternated with crosscourts. Player A hits a rail on the forehand side and returns to the "T" while Player B answers with a forehand crosscourt. Player A returns that crosscourt (which should land behind the red line) with a backhand rail and the drill continues. Players switch positions. If players do not stop at the "T," it is best to modify the drill and hit a random number of rails or crosscourts and then see how many they can do, not knowing if the stroke is to be a rail or a crosscourt.

Drill #3. One player hits a forehand rail while the other player boasts the forehand return. Again, returning to the "T" is important. Players alternate rails and boasts on forehand and backhand sides.

Drill #4. Player A hits a forehand rail; Player B hits a forehand boast. Player A runs up and returns with a backhand drop, then Player B hits a backhand rail. The sequence then is repeated. The players should concentrate on moving toward the ball and hitting an effective stroke.

To summarize, fitness for squash involves a three-part program: pre-season conditioning, pre-practice warm-up and body-racquet control. The player should strive to practice gamelike situations offering wide and varied responses wherever possible. If the player is fit, can move the ball efficiently, and executes the proper stroke at the proper time, the player is on the road to becoming a successful squash player.

A Winner-Error Chart for Squash

ANN BATCHELDER

Ann Batchelder received her M.Ed. at Framingham State College in Massachusetts and her Ed.D. at Boston University. She was ranked nationally for four years in the top 10. She has run numerous clinics for national and state squash organizations. She is currently doing research in both squash and education in the field of interaction analysis. Ann is an assistant professor in physical education at Wellesley College (Massachusetts) where she has been coaching the women's squash team for seven years.

It is often difficult for coaches to make concise, objective observations about a player's effort during competitive matches. To help make these judgments, several winner-error charts have been developed in tennis, with one from the University of Redlands (California) notable for its attempt to observe play systematically during practice or competitive matches. As a squash coach, it seemed a valuable exercise to devise a similar winner-error chart for squash.

This system is similar to many educational observation systems since it uses numerical and letter symbols to code various behaviors. These symbols can be readily learned, written down quickly, and adapted to any situation. The key to this particular winner-error chart is given below.

Key

Strokes

1. Serve
2. Return of Serve
3. Forehand
4. Backhand
5. Volley
6. Drop Shot
7. Corner Shot

Subscriptions

- t tin
- c crosscourt
- s straight shot
- L lob
- h hard (serve)
- X winner (before category number)

The categories can be mastered while recording a practice match and are not as complicated as they might appear. An "X" is placed before any winning shot, so "X24" is a backhand return of serve winner, while an "X1h" is a hard serve winner. Any numerical category without an X preceding it indicates that an error has occurred, so a "4t" is a backhand drive into the tin, while a "63t" is a forehand drop shot into the tin.

These categories are placed in squares as the game develops, in the following manner.

Player																
A	X1h		X3c	4tc	24ts		X3c	4tc		4tc	X3c	X1h			24ts	23ts
B		24t				X1L		3tc	X6a			X5a	X3a	X3a	X5a	
A				X1h	4tc	24c					Score Reasons					
B	3c	X63	74c								B 15-10					

Table 1. Data Sheet

Point 1: Player A serves a hard serve which B cannot reach.

Point 2: Player A serves, B returns a backhand into the tin.

Point 3: A serves again, B returns, A hits a crosscourt forehand winner, and so on.

At the end of the match (or game), a summary chart can be used to show common patterns of winners (W) or errors (E).

Player	Serve 1	Return of Serve 2 3		Forehand 3	Backhand 4	Volley 5	Drop 6	Corner 7
A	W E 5h 0 (+5)	W E 4 3t (+1)	W E 1 4t (-3)	W E 9 6 (+3)	W E 5 8 (-3)	W E 0 0 (0)	W E 0 0 (0)	W E 0 0 (0)
B	W E 1L 0 (+1)	W E 2 1 (+1)	W E 3 3 (0)	W E 5 1 (+4)	W E 6 4 (+2)	W E 5 1 (+4)	W E 5 3 (+2)	W E 2 4 (-2)

Table 2. Summary Chart

This hypothetical summary chart gives several immediate indications of the strengths and weaknesses of both players. Player A likes to serve hard, has a stronger forehand than backhand, and does not use volleys or short shots to end points. Player B should, therefore, expect the hard serve, play to A's backhand, and stay reasonably deep in the court.

Any particular areas of interest, such as faults (perhaps an "f" in the corner of the square) or forced errors (an "E" before the category number), can be subscripted easily to handle the specific interests or needs of any player or coach.

From past experience, this system can be learned by any person conversant with squash in the period of a game or two. It can then be used during a practice for several purposes. It points out strengths and weaknesses in each player's strokes, giving a clear indication of areas in which further drilling would be helpful. It also gives the individual who is using the winner-error chart an exercise in analyzing patterns of strokes and strategy. During a match, it provides coaches with a systematic tool which will help them in the coaching role. This chart is, therefore, an instrument which will help both the coach and the player, and will help improve the level of play in a short time.

The Doubles Game

MARY O'TOOLE

Mary O'Toole received her B.S. degree from the University of Massachusetts and her M.S. degree from the University of Illinois. She is presently a research assistant at Temple University working on her Ph.D. in physical education and sports medicine. She is ranked nationally at No. 8 in singles and No. 2 in doubles with her partner Irma Brogan (1977).

The game of doubles squash is a game of technique, applied knowledge, experience and finesse. The winning team is not always (or often) the younger, faster and stronger team. Surprisingly, it can leave excellent singles players completely befuddled. For this reason, doubles can be very exciting to all who play it.

Equipment

Court. The equipment used for doubles differs slightly from that used in singles. The court is a rectangle 45 feet long by 25 feet wide with the front and side walls 20 feet high and the back wall 7 feet high. The service line is 8 feet 2 inches above the floor and a telltale of 17 inches is at the bottom of the front wall. Each service box is 15 feet by 12½ feet.

Racquet and Ball. The racquet and ball are the only essential pieces of equipment. The racquet must meet the same specifications as a singles racquet. However, most players will opt for a doubles racquet which is one-half to one ounce heavier than a singles racquet. The ball is the standard doubles ball as specified in the Court, Racquet and Ball Specifications of the U.S. Squash Racquets Association.

General Description of Doubles

Court Coverage. In doubles, a side by side form of court coverage is used; the court is divided from the center of the front wall to the center of the back wall. One partner plays the left wall while the other plays the right. If both players are right-handed or both are left-handed, the balls coming to the center of the court should be played by the player whose forehand is in the center. Otherwise, the team must decide who is to take the center balls. Balls which hit the right side wall close to the back wall, then the back wall before the floor, should be let go by the right wall player and taken by the partner and vice versa (Figure 1). During a rally, teams rather than individual players must alternate hits. As in any game of doubles, if one's partner is out of position, a player may run into the partner's territory to hit a shot.

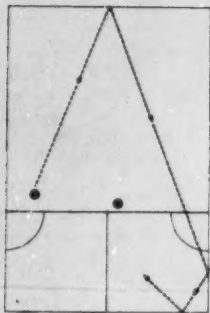


Figure 1.

Rotation. To allow openness and safety in play, most good players use a rotation system during a rally. When a player is striking the ball, the partner should be on the inside (i.e., close to the "T") and the opposing player who is on the same side of the court as the partner should be on the outside or close to the wall (Figure 2). This rotation serves a double function. For the striking team, it allows the striker to hit a hard crosscourt shot without fear of a "let" on the partner spoiling a good shot. For the receiving team, it allows the receiver to play the ball cleanly without interference from the opponent.

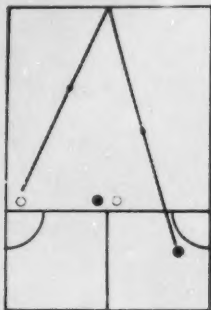


Figure 2.

Pace. The pace of the shots varies more widely in doubles than in singles. The most effective shots may be soft, high lobbs since a hard shot that passes one opponent may be an easy shot for the other. For this reason, good singles players may find some of their best shots coming back at them.

Scoring and Service Rotation. The scoring of a doubles game is the same as for a singles game. A point is scored by one of the teams on each rally during the 15-point game. For details on scoring and serving rotation, please see Doubles Rules #1, #2, and #4.

Shots

Service. Although many techniques may be employed within the framework of the rules, the underhand lob serve is the most effective. If done properly, the ball should strike the front wall very high, rebound to the opposite service box, glance off the side wall, and drop in the back corner. Since it is an advantage to serve, the team winning the racquet toss should elect to serve. On a serve from the right, both members of the serving team and the right wall player on the receiving team stand in the right service box. The server must also have one foot in the quarter circle. The receiving team's left wall player stands in the left service box (Figure 3). The same positioning is used when serving from the left with the receiving team's right wall player alone in the right box.

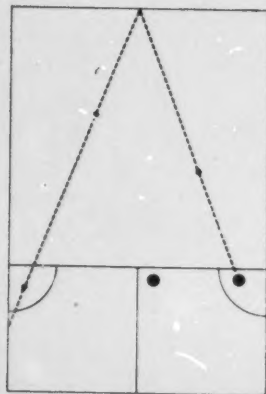


Figure 3.

Lob. The importance of a good lob in doubles cannot be over-emphasized. This shot may be used as either an offensive shot or a defensive shot. It may be hit either back down the same wall or crosscourt. The lob should be executed with the face of the racquet open and hit as softly as possible, yet hit high enough to rebound close to the back wall.

Drive. The drive is an offensive shot used to crack the ball past one's opponent for a winner. The drive may be hit back down the same wall (as close to the wall as possible), crosscourt or straight down the middle of the court. The drive straight down the middle should be used only rarely—either when the opponents are out of position or anticipating another shot.

Drop Shot. A drop shot is an offensive shot used to try to win the point outright. As the name implies, the ball is hit to the front wall close above the telltale so that it will drop to the floor close to the front wall and out of the opponents' reach. The drop shot may be hit straight and close to the near side wall or it may be hit crosscourt (Figure 4). This shot will be most effective if the striker is in front of the red line when hitting and the ball is dropped to a side where the opponent is behind the red line.



Figure 4.

Corner Shot. A corner shot may be defined as any shot which hits the side wall close to the front wall, rebounds to the front wall, then rebounds back into play. In common usage, a corner shot is one that hits the near side wall first (Figure 5). A reverse corner



Figure 5.

is one that is hit crosscourt to the opposite side wall before the front wall (Figure 6). A corner shot will rebound to the opposite side of the court from where it is hit while a reverse corner will rebound to the striker's side.

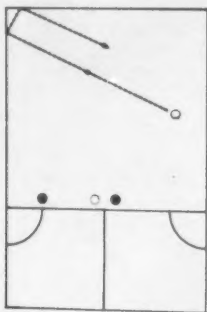


Figure 6.

Basic Strategy

Creating Opportunities for Shots. As in the other racquet sports, the strategy of doubles may be simply stated as "hit it where they ain't." Creating the opportunity to hit a certain shot is as important in the game of doubles as being able to execute that particular shot for a point. There are two ways of creating these opportunities. The first is to force your opponent to make a weak shot. In most cases, a weak shot will be one that either bounces halfway back to the red line or one that is away from the sidewall and easily volleyed by a player at the red line. A player may be forced into a weak return by an opponent's shot which forces a hit from very deep in the court (e.g., an offensive lob), a hit from very close to the wall (e.g., a drive or drop shot), or a hit on the run (e.g., a drop shot or corner shot). The second method of creating an opportunity is to force your opponent out of position. Varying combinations of drops, lobs, corners and drives by one team can force one or both of the opponents out of the home positions just in front of the red line on their respective sides of the court.

Shot Making. Once an opportunity has been created, a shot must be made to put the ball away for the point. If a weak shot has been made, the player going to strike the ball must choose a shot that will be difficult for the opposing players to return. Knowledge of the whereabouts of the two opponents is essential to making that decision. If the opposing player on the striker's side of the court is in front of the red line, the striker should hit to the other side of the court or hit a drive or lob back down his/her own wall. If the opposing player on the striker's side is back behind the red line, a good choice of shot would be a straight drop or a reverse corner. The striker must also consider the position of the opponent on the opposite side of the court. If that opponent is up front, a hard drive cross-court will be good. If the opponent is back, a corner or crosscourt drop will probably win the point.

If one or both of the players on the opposing team have been forced out of position, the striker has a far easier time choosing a shot. There will be an obvious gap in the court coverage. The striker needs only to put the ball to the open, unprotected spot.

Doubles squash is a game that can be fun and a challenge to all who play it. Because of the complexity of knowing where three other people are in the court at all times, very few doubles players come out of a court without having learned something new.

Squash Bibliography

Revised by CARYL M. NEWHOF

Smith College

Northampton, Massachusetts

Books

- Chapman, Claire. *Teaching Squash*. New Rochelle, NY: Sportshelf, 1977.
- Dardir and Garth Gilmour. *Dardir on Squash*. Auckland, New Zealand: Holly Press Ltd., 1971. 118 pp.
- Francis, Austin. *Smart Squash: Using Your Head To Win*. Philadelphia: J.B. Lippincott, 1977. 192 pp.
- Kahn, Hashim and Randall, Richard E. *Squash Racquets: The Kahn Game*. Detroit: Wayne State University Press, 1967. 176 pp.
- Sports Illustrated Book of Squash*. Philadelphia: J.P. Lippincott, 1963. 90 pp.
- Truby, John O., Jr. *The Science and Strategy of Squash*. New York: Charles Scribner's Sons, 1975. 252 pp.
- Varner, Margaret and Bramall, Norman B. *Squash Racquets*. Du-buque, IA: William C. Brown Co., 1967. 67 pp.
- Wood, Peter. *The Book of Squash*. New York: Van Nostrand Reinhold, 1972. 127 pp.

Articles

- Tennis-Badminton-Squash Guide, 1972-74*. Washington, DC: AAHPER, 1972.
- Tennis-Badminton-Squash Guide, 1974-76*. Washington, DC: AAHPER, 1974.
- Tennis-Badminton-Squash Guide, 1976-78*. Washington, DC: AAHPER, 1976.

Magazines

- Racquet*. Reflex Sports, Inc., 342 Madison Ave., New York, NY 10017.

Free Materials

- Falk Sport Facts*. No. 74, Squash Racquets. The Falk Corporation, Box 492, Milwaukee, WI 53201.

Other Source Materials

- Barnaby, John M. *Squash Racquets in Brief*. 1961. 19 pp. Available from the author by mail: South Lincoln, MA.

USWSRA Squash Instruction Portfolio. USWSRA, 741 Mustin Lane,
Villanova, PA 19085.

Audiovisual Material

Films

Squash: Everybody's Racquet and Championship Squash. 16mm, 12½ min., color. An instructional and exhibition film produced by the National Squash Racquets Educational Foundation, Inc. and Squashcon, Inc. Instruction: Al Molloy; exhibition: Niederhoffer and Kahn. Member club \$10, nonmember club \$15, plus postage. Films may be purchased from USSRA, 211 Ford Rd., Bala Cynwyd, PA 19004.

UNITED STATES SQUASH RACQUETS ASSOCIATION OFFICIAL SINGLES RULES

Changes in rules have been shaded; wording changes are indicated by a check (✓).

1. **SERVER**—At the start of a match the choice to serve or receive shall be decided by the spin of a racquet. The server retains the serve until he loses a point, in which event he loses the serve.

2. **SERVICE**—(a) The server, until the ball has left the racquet from the service, must stand with at least one foot on the floor within and not touching the line surrounding the service box and serve the ball onto the front wall above the service line and below the 16' line before it touches any other part of the court, so that on its rebound (return) it first strikes the floor within, but not touching, the lines of the opposite service court, either before or after touching any other wall or walls within the court. A ball so served is a good service, otherwise it is a Fault.

(b) If the first service is a Fault, the server shall serve again from the same side. If the server makes two consecutive Faults, he loses the point. A service called a Fault may not be played, but the receiver may volley any service which has struck the front wall in accordance with this rule.

(c) At the beginning of each game, and each time there is a new server, the ball shall be served from [redacted] from whichever service box the server elects and thereafter alternately until the service is lost or until the end of the game. If the server serves from the wrong box there shall be no penalty and the service shall count as if served from the correct box, provided, however, that if the receiver does not attempt to return the service, he may demand that it be served from the other box, or if, before the receiver attempts to return the service, the Referee calls a Let (See Rule 9), the service shall be made from the other box.

(d) A ball is in play from the moment at which it is delivered in service until (1) the point is decided; (2) a Fault, as defined in 2(a) is made; or (3) a Let or Let Point occurs (See Rules 9 and 10).

3. **RETURN OF SERVICE AND SUBSEQUENT PLAY**—(a) A return is deemed to be made at the instant the ball touches the racquet of the player making the return. To make a good return of a service or of a subsequent return the ball must be struck on the volley or before it has touched the floor twice, and reach the front wall on the fly above the tell-tale [redacted] and it may

touch any wall or walls within the court before or after reaching the front wall. On any return the ball may be struck only once. It may not be "carried" or "doubled-hit".

(b) If the receiver fails to make a good return of a good service, the server wins the point. If the receiver makes a good return of service, the players shall alternate making returns until one player fails to make a good return. The player failing to make a good return loses the point.

(c) Until the ball has been touched or has hit the floor twice, it may be struck at any number of times.

(d) If at any time [REDACTED] the ball hits outside the playing surfaces of the court (the ceiling and/or lights, or on [REDACTED] a line marking the perimeters of the playing surfaces of the court), the player so hitting the ball loses the point, [REDACTED] (See Rules 9 and 10.)

4. SCORE—Each point won by a player shall add one to his score.

5. GAME—The player who first scores fifteen points wins the game excepting that:

(a) At "thirteen all" the player who has first reached the score of thirteen must elect one of the following before the next serve:

(1) Set to five points—making the game eighteen points.

(2) Set to three points—making the game sixteen points.

(3) No set, in which event the game remains fifteen points.

(b) At "fourteen all" provided the score has not been "thirteen all" the player who has first reached the score of fourteen must elect one of the following before the next serve:

(1) Set to three points—making the game seventeen points.

(2) No set, in which event the game remains fifteen points.

6. MATCH—The player who first wins three games wins the match, except that a player may be awarded the match at any time upon the retirement, default or disqualification of an opponent.

7. RIGHT TO PLAY BALL—Immediately after striking the ball a player must get out of an opponent's way and must:

(a) Give an opponent a fair view of the ball, provided, however, interference purely with an opponent's vision in following the flight of the ball is not a Let (See Rule 9).

(b) Give an opponent a fair opportunity to get to and/or strike at the ball in and from any position on the court elected by the opponent; and

(c) Allow an opponent to play the ball to any part of the front wall or to either side wall near the front wall.

8. BALL IN PLAY TOUCHING PLAYER

(a) If a ball in play, after hitting the front wall, but before being

returned again, shall touch either player, or anything he wears or carries (other than the racquet of the player who makes the return) the player so touched loses the point, except as provided in Rule 9(a) or 9(b).

(b) If a ball in play touches the player who last returned it or anything he wears or carries before it hits the front wall, the player so touched loses the point.

(c) If a ball in play, after being struck by a player on a return, hits the player's opponent or anything the opponent wears or carries before reaching the front wall:

(1) The player who made the return shall lose the point if the return would not have been good.

(2) The player who made the return shall win the point if the ball, except for such interference, would have hit the front wall fairly; provided, however, the point shall be a Let (see Rule 9) if:

(i) The ball would have touched some other wall before so hitting the front wall.

(ii) The ball has hit some other wall before hitting the player's opponent or anything he wears or carries.

(iii) The player who made the return shall have turned following the ball around prior to playing the ball.

(d) If a player strikes at and misses the ball, he may make further attempts to return it. If, after being missed, the ball touches his opponent or anything he wears or carries:

(1) If the player might otherwise have made a good return, the point shall be a Let.

(2) If the player could not have made a good return, he shall lose the point. If any further attempt is successful but the ball, before reaching the front wall, touches his opponent or anything he wears or carries and Rule 8(c)(2) applies, the point shall be a Let.

(e) When there is no referee, if the player who made the return does not concede that the return would not have been good, or, alternatively, the player's opponent does not concede that the ball has hit him (or anything he wears or carries) and would have gone directly to the front wall without first touching any other wall, the point shall be a Let.

(f) When there is no referee, if the players are unable to agree whether 8(d)(1) or 8(d)(2) applies, the point shall be a Let.

9. LET—A Let is the playing over of a point.

On the replay of the point the server (1) is entitled to two serves even if a Fault was called on the original point, (2) must serve from the correct box even if he served from the wrong box on the original point, and (3) provided he is a new server, may serve from a service box other than the one selected on the original point.

In addition to the Lets described in Rules 2(c) and 8(c)(3), the

following are Lets if the player whose turn it is to strike the ball could otherwise have made a good return:

- (a) When such player's opponent violates Rule 7.
- (b) When owing to the position of such player, his opponent is unable to avoid being touched by the ball.
- (c) When such player refrains from striking at the ball because of a reasonable fear of injuring his opponent.
- (d) When such player before or during the act of striking or striking at the ball is touched by his opponent, his racquet or anything he wears or carries.
- (e) When on the first bounce from the floor the ball hits on or above the six and one half foot line on the back wall; and

(f) When a ball in play breaks. If a player thinks the ball has broken while play is in progress he must nevertheless complete the point and then immediately request a Let, giving the ball to the Referee for inspection. The Referee shall allow a Let only upon such immediate request if the ball in fact proves to be broken (See Rule 13(c).)

A player may request a Let or a Let Point (See Rule 10). A request by a player for a Let shall automatically include a request for a Let Point. Upon such request, the Referee shall allow a Let, Let Point or no Let.

No Let shall be allowed on any stroke a player makes unless he requests such before or during the act of striking or striking at the Ball.

The Referee may not call or allow a Let as defined in this Rule 9 unless such Let is requested by a player; provided, however, the Referee may call a Let at any time (1) when there is interference with play caused by any factor beyond the control of the players, or (2) when he fears that a player is about to suffer severe physical injury.

10. LET POINT—A Let Point is the awarding of a point to a player when an opponent unnecessarily violates Rule 7(b) or 7(c).

An unnecessary violation occurs (1) when the player fails to make the necessary effort within the scope of his normal ability to avoid the violation, thereby depriving his opponent of a clear opportunity to attempt a winning shot, or (2) when the player has repeatedly failed to make the necessary effort within the scope of his normal ability to avoid such violations.

The Referee may not award a Let Point as defined in this Rule 10 unless such Let Point or a Let (see Rule 9) is requested by a player.

When there is no referee, if a player does not concede that he has unnecessarily violated Rule 7(b) or 7(c), the point shall be a Let.

11. CONTINUITY OF PLAY—Play shall be continuous from the first service of each game until the game is concluded. Play shall never be suspended solely to allow a player to recover his strength or

wind. The provisions of this Rule 11 shall be strictly construed. The referee shall be the sole judge of intentional delay, and, after giving due warning, he must default the offender.

Between each game play may be suspended by either player for a period not to exceed two minutes. Between the third and fourth games play may be suspended by either player for a period not to exceed five minutes. Except during the five minute period at the end of the third game, no player may leave the court without permission of the referee.

Except as otherwise specified in this Rule 11, the Referee may suspend play for such reason and for such period of time as he may consider necessary.

If play is suspended by the Referee because of an injury to one of the players, such player must resume play within one hour from the point and game score existing at the time play was suspended or default the match, provided, however, if a player suffers cramps or pulled muscles, play may be suspended by the Referee once during a match for such player for a period not to exceed five minutes after which time such player must resume play or default the match.

In the event the Referee suspends play other than for injury to a player, play shall be resumed when the Referee determines the cause of such suspension of play has been eliminated, provided, however, if such cause of delay cannot be rectified within one hour, the match shall be postponed to such time as the Tournament Committee determines. Any such suspended match shall be resumed from the point and game score existing at the time the match was stopped unless the Referee and both players unanimously agree to play the entire match or any part of it over.

12. ATTIRE AND EQUIPMENT—(a) The color of a player's shirt or trousers may be either white or a solid pastel. The Referee's decision as to a player's attire shall be final.

(b) A standard singles ball as specified in the Court, Racquet and Ball Specifications of this Association shall be used.

13. CONDITION OF BALL—(a) No ball, before or during a match, may be artificially treated, that is, heated or chilled.

(b) At any time, when not in the actual play of a point, another ball may be substituted by the mutual consent of the players or by decision of the Referee.

(c) A ball shall be determined broken when it has a crack which extends through both its inner and outer surfaces. The ball may be squeezed only enough to determine the extent of the crack. A broken ball shall be replaced and the preceding point shall be a Let (See Rule 9(f)).

(d) A cracked (but not broken) ball may be replaced by the mu-

tual consent of the players or by decision of the Referee, and the preceding point shall stand.

14. COURT—(a) The singles court shall be specified in the Court, Racquet and Ball Specifications of this Association.

(b) No equipment of any sort shall be permitted to remain in the court during a match other than the ball used in play, the racquets being used by the players, and the clothes worn by them. All other equipment, such as extra balls, extra racquets, sweaters when not being worn, towels, bathrobes, etc., must be left outside the court. A player who requires a towel or cloth to wipe himself or anything he wears or carries should keep same in his pocket or securely fastened to his belt or waist.

15. REFEREE—(a) A Referee shall control the game. This control shall be exercised from time the players enter the court. The Referee may limit the time of the warm up period to five minutes, or shall terminate a longer warm up period so that the match commences at the scheduled time.

(b) The Referee's decision on all questions of play shall be final except as provided in Rule 15(c).

(c) Two judges may be appointed to act on any appeal by a player to a decision of the Referee. When such judges are acting in a match, a player may appeal any decision of the Referee to the judges, except a decision under Rules 11, 12(a), 13, 15(a) and 15(f). If one judge agrees with the Referee, the Referee's decision stands; if both judges disagree with the Referee, the judges' decision is final. The judges shall make no ruling unless an appeal has been made. The decision of the judges shall be announced promptly by the Referee.

(d) A player may not request the removal or replacement of the Referee or a judge during a match.

(e) A player shall not state his reason for his request under Rule 9 for a Let or Let Point or for his appeal from any decision of the Referee provided, however, that the Referee may request the player to state his reasons.

(f) A Referee serving without judges, after giving due warning of the penalty of this Rule 15(f), in his discretion may disqualify a player for speech or conduct unbecoming to the game of squash racquets, provided that a player may be disqualified without warning if, in the opinion of such Referee, he has deliberately caused physical injury to his opponent.

When two judges are acting in a match, the Referee in his discretion, upon the agreement of both judges, may disqualify a player with or without prior warning for speech or conduct unbecoming to the game of squash racquets.

OFFICIATING

177

NAGWS AFFILIATED BOARDS OF OFFICIALS

The Affiliated Boards of Officials (ABO) is one of 9 structures of the National Association for Girls and Women in Sport (NAGWS).

The following official statement of goals was approved by the ABO Executive Council (Fall, 1977) in an effort to clarify the future directions of ABO:

1. To improve the quality of officiating for girls and women's sports contests, regardless of the level of skill/maturity of players, or the rules governing the contest.
2. To increase the number of competent women officials, not to the exclusion of men, but as needed affirmative action.
3. To promote the involvement of women in the governing bodies of other sports officiating groups.

The purpose of the ABO is to promote quality officiating for girls and women's sport programs by:

- (1) Developing officiating techniques
- (2) Providing materials for training and rating officials
- (3) Disseminating information about officiating
- (4) Promoting the use of ABO-rated officials
- (5) Developing standards of conduct for officials compatible with the philosophy of the NAGWS
- (6) Providing the organizational and administrative structure for the coordination of Affiliated Boards
- (7) Promoting standards with respect to fees, ratings and uniforms.

Approximately 190 Board of Officials throughout the United States are affiliated with ABO/NAGWS. These boards provide opportunities for interested individuals to learn about officiating or judging and are authorized to give NAGWS ratings.

The Principles and Techniques of Officiating (PTO) Committees for each of the 11 sports in which ABO grants ratings are specifically concerned with enumerating the mechanics used by referees, umpires and judges in officiating games, meets or matches.

The Examinations and Ratings Committees for each of the 11 sports in which ABO grants ratings are responsible for preparing, revising and analyzing the officiating theoretical (written) examinations.

If you have questions concerning the techniques of officiating tennis, write to:

ROSEMARY FRI
University of Northern Colorado
Greeley, CO 80639

Information regarding study questions in this *Tennis Guide* or on the theoretical examination on tennis should be addressed to:

DAN SUMMERS
HER Bldg. 112G
Indiana University
Bloomington, IN 47401

If you have questions concerning the techniques of officiating badminton, write to:

MYRNA STEPHENS
Illinois State University
Normal, IL 61761

Information regarding study questions in this *Badminton Guide* or on the theoretical examination on badminton should be addressed to:

DIANE HALES
1421 Niagra
Claremont, CA 91711

Additional information regarding ABO officiating concerns may be secured by writing:

NAGWS Executive Secretary
1201 Sixteenth St., N.W.
Washington, DC 20036

179

STATEMENT OF PHILOSOPHY OF THE AFFILIATED BOARDS OF OFFICIALS:

THE ROLE OF THE OFFICIAL IN THE COMPETITIVE SITUATION

Educational values should be of primary concern to all who have leadership roles in a competitive program. As one of those fulfilling leadership roles, the official must be concerned with promoting those values and with the welfare of the participant. The unique contribution of the official is assuring equal opportunity and fair play for all. The official essentially acts as an arbitrator, providing judgments that are within the spirit and intent of the rules. Decisions are based on objective evidence, free from bias and from the emotion that often pervades the competitive environment.

An official enters the competitive situation with a thorough understanding of the letter, as well as the intent of the rules, the strategy and skills of the sport to be played, and correct execution of officiating techniques to view the contest accurately. The official maintains a friendly yet reserved attitude toward all throughout the sport experience. The official is flexible, operating within officiating standards appropriate to the age of the performers, the level of skill, and the facilities available. Biases by players, spectators and coaches will be evaluated with an understanding not only of the multiplicity of ways in which individuals may react to a competitive experience but also of the behavior appropriate to such an educational experience. Duties will be performed fairly, efficiently and without drawing undue attention to the official. In order to strengthen the official's effectiveness, personal evaluation of performance will be made and solicitation of constructive criticism from coaches, players and administrators will be sought. Though receiving a fee, the ultimate reward to the official will be that of having rendered a valuable service to girls and women who have found personal meaning in expressing themselves through the medium of sport.

STANDARDS FOR OFFICIALS RATINGS IN TENNIS AND BADMINTON¹

Note: Changes from the previous *Guide* have been indicated by shading.

There are six ratings for officials, five of which qualify the holder to officiate sports contests. Each is designed to meet the needs of various sports events and to stimulate interest of individuals who desire to officiate.

The *Examiner's rating* signifies the holder is qualified to rate officials.

The *Intramural rating* qualifies the holder to officiate contests in the school in which the holder is enrolled or contests of comparable level.

The *Apprentice rating* qualifies the holder to officiate contests which may be adequately controlled by a competent, but inexperienced official.

The *Local rating* signifies that the holder is qualified to officiate interscholastic and intercollegiate contests requiring a competent and experienced official.

The *State rating* signifies that the holder is capable of officiating any contest within the state or region where the rating is awarded.

The *National rating* signifies that the holder is capable of officiating any contest anywhere in the United States. This rating is for the most highly skilled official.

Specific requirements for all ratings are outlined below.

Examiner

1. Prerequisite—must have held a state or national rating for a minimum period of six years. (The six years need not be consecutive but must be within the previous eight-year period.)
2. Theoretical examination—national examination, minimum 82.
3. Duration—two years from next June 1.
4. Renewal:
 - a. In order to be eligible for renewal, the candidate must have been involved in the rating or training of officials.
 - b. To renew, the candidate must pass the national theoretical examination with a minimum score of 82.
 - c. Should the rating lapse for one year or less, the candidate remains eligible for renewal.
 - d. Should the ratings lapse for more than one year, the candidate must qualify through earning a State rating.
5. This rating is transferable to other Boards.

¹ Note the current *NAGWS Basketball Guide* for information regarding ratings in all sports and for the most updated information about the standards and practices of the Affiliated Boards of Officials.

Intramural Official

1. Minimum standards—set by Affiliated Board.
2. Duration—two years from next June 1.

Apprentice Official

1. Minimum standards can be set by the affiliated board, or these standards may be followed:
 - a. Theoretical examination—national examination, minimum [redacted]
 - b. Practical examination^{2, 3}—minimum 75; minimum number of raters: one.
2. Duration—Two years from next June 1.

Local Official

1. Theoretical examination—national examination, minimum 76.
2. Practical examination^{2, 3}—minimum 80; minimum number of raters: three.
3. Duration—two years from next June 1.
4. This rating is transferable to other Boards.

State Official

1. Theoretical examination—national examination, minimum 82.
2. Practical examination^{2, 3}—minimum 85; minimum number of raters: three.
3. Duration—two years from next June 1.
4. This rating is transferable to other Boards.

National Official

1. Theoretical examination—national examination, minimum 88.
2. Practical examination^{2, 3}—minimum, 88; minimum number of raters: three, one of whom must hold a National rating.
3. Duration—two years from next June 1.
4. This rating is transferable to other Boards.

[redacted] a state rating. Any rating team may include no more than one Examiner.

³ Note commentary on [redacted]
[redacted] on page 186.

The following alternative *practical* rating methods were approved by the ABO Executive Council (Fall, 1976) for an experimental period of two years (1976-1978). These methods may be used for all sports except Gymnastics and Synchronized Swimming. The rationale for this experiment is to:

1. absorb officials trained by other groups in an easier manner.
2. attract and train new officials.
3. open new alternatives to local boards.
4. give local boards autonomy to determine local needs and set their own standards based on those needs.
5. cut down on the person hours involved in rating and re-rating.
6. attempt to answer the frequent voiced concerns of many local boards about the present practical rating system.

Authority is extended to all boards to establish their own criteria and regulations (theory and practical) for Local and Apprentice ratings in each sport, in order to meet their own specific needs.

Local ratings earned by these experimental alternative methods shall be designated as Local E and shall be non-transferable, except as approved by the Board to which the official moves.

The following guidelines for practical examinations are recommended for earning and renewing ratings.

- I. *New Candidates* (inexperienced or unregistered officials)
 - A. The candidate should meet one of the following criteria:
 1. attend a series of structured clinics set up by the Board, the number to be specified by the Board or
 2. secure a passing grade and the recommendation of the instructor in an officiating course at the college level (the course must be approved by the Board) or
 3. attend officiating courses offered by another organization such as the recreation department or evening adult education. Candidate must secure a recommendation from said course. Such a course must be approved by the Board.
 - B. The Board should differentiate carefully between the criteria for Local and Apprentice ratings. Criteria in addition to the above might well be required for the Local Rating.
 - C. New officials shall work with more experienced officials for a designated number of contests.
- II. *Renewal candidates*
 - A. A committee of 3 examiners shall be necessary to upgrade a rating to the State or National level. In the case of basketball and volleyball, the National rating may be earned only at an NRT rating session.

B. A candidate who wishes to renew at the current level (Apprentice through National) may:

1. officiate a minimum of 3 contests, during which a minimum of 5 evaluators are involved (present alternative method with reduction of number of evaluators) or
2. officiate a designated number of contests per session, the number to be determined by the Board.

C. If written complaints are received about an official renewing as in B1 or B2, a more formal rating method might be desirable.

III. Registered officials (other than probationary)

A. Experienced officials, registered by other officiating organizations, should be awarded a Local rating upon taking and receiving a passing grade (as specified by the Board) on the NAGWS/ABO Theoretical Test (Form A or B) and by demonstrating ability to use ABO officiating techniques. The method of demonstrating shall be specified by the Board, but should recognize the official's experience and be as uncomplicated as possible.

B. Registered officials desiring a rating higher than Local shall meet the criteria specified by ABO on page 185.

Emblem and Uniform

The emblem for National officials in all sports consists of a shield. Other emblems are available for State, Local, Apprentice, and Intramural officials.

The official shirt for tennis and badminton is a navy blue and white striped tailored shirt or a navy blue and white striped jersey. A navy blue skirt, shorts or slacks, appropriate to the situation should be worn with the shirt; white may be substituted for the navy blue. Officials who receive fees for officiating are required to wear the official shirt.

The official shirts and emblems are available from The Hanold Company, Sebago Lake, Maine 04075. The company can also provide blazers. When ordering, send dress size and check or money order for correct amount. Anyone may order the official shirt. A current rating card must accompany an individual's order for an emblem; however, it is not necessary to send a rating card when ordering a shirt.

An affiliated board may wish to have a supply of shirts or emblems for distribution to newly rated officials. A quantity order may be placed *only* by the affiliated board chairperson. It is not necessary that chairperson's rating card be enclosed, but full payment must accompany the order.

Prices: Wash-and-wear shirt, \$7.50; knit jersey with zipper neck,

\$13.50; navy flannel blazer, \$35.00; National State, Local, Apprentice, and Intramural emblems, \$1.75 (All prices are subject to change.)

Shipping charge: 75 cents per order.

Recommended Fees

Local boards may establish or negotiate fees that reflect the level of rating of the official as well as the type and level of competition within their locale. Boards are encouraged to establish fees in conjunction with local governing groups. The fee schedule may reflect differential pay based upon rating levels.

Registration of Officials

Most states require those who officiate either boys or girls' interscholastic contests to be registered with the State High School Athletic Association or other administrative body. All NAGWS/ABO officials who officiate high school or junior high school games are urged to cooperate fully with their state regulatory body.

An official who wishes to maintain amateur status as a participant in a sport must be aware of the ruling(s) on amateur status established by the governing body for that sport.

Amateur status is defined by high school and college governing bodies as well as by the USOC recognized national governing bodies for each specific sport.

The official who wishes to maintain amateur status as a participant is responsible for investigating the specific regulations of the governing body with jurisdiction over such eligibility.

Amateur Standing in Tennis

The United States Tennis Association has jurisdiction for amateur status in tennis. Information regarding the USTA's restrictions may be secured by writing USTA, 51 E. 42nd St., New York, NY 10017.

Amateur Standing in Badminton

The United States Badminton Association has jurisdiction for amateur status in badminton. Information regarding the USBA's restrictions may be secured by writing USBA, P.O. Box 237, Swartz Creek, MI 48473.

HOW TO BECOME A RATED OFFICIAL

1. Study the rules, the article on the techniques of officiating and the study questions.
2. Attend interpretations meetings and officiating clinics or training courses conducted in your vicinity.
3. Practice often. To some, officiating comes easily; to others it comes only as the result of hard work and concentration. Welcome criticism and work hard to improve.
4. Find out from the chairperson of the nearest affiliated board when examinations for ratings are to be held. (Consult list of boards in NAGWS Directory available from NAGWS/AAHPER, 1201 Sixteenth St., N.W., Washington, DC 20036. Cost: \$3.00.)
5. Take your rating remembering that it is the aim of the Affiliated Boards of Officials to maintain high standards for officials.

INFORMATION FOR AFFILIATED BOARDS

How to Establish a Board of Officials

1. Establish the need for an affiliated board by contacting individuals in the area who have current ratings or who are interested in standardizing and raising the level of officiating badminton, basketball, competitive swimming and diving, fencing, gymnastics, softball, (fast pitch and slow pitch), soccer, synchronized swimming, tennis, track and field, or volleyball in that area.
2. Write to Edith Cobane, ABO Past Chairperson, PE 244, State University of New York, 1400 Washington Ave., Albany, NY 12222, for a sample copy of an authorized constitution for officials' boards and the *Policies and Procedures Handbook* and application for becoming an affiliated board.
3. At a designated meeting of interested individuals present plans for forming a board.
 - a. Choose a name which will permit expansion of function as need may arise; do not limit title to one sport.
 - b. From the group, elect a chairperson, chairperson-elect, secretary, and treasurer.
 - c. Form an examining committee of at least three members for each sport in which you would like to give ratings. If any member has been rated elsewhere, such experience should be helpful; such a rating is not necessary, however. It is suggested that members of the examining committee be examined and obtain ratings from other affiliated boards whenever possible.
 - d. Make plans for drawing up a constitution according to the sample copy received from the Past Chairperson of the NAGWS Affiliated Boards of Officials. Plan to devote some time to the study of the rules and to practice officiating. If possible, secure the assistance of some rated official in each sport for which the Board anticipates giving ratings.
4. Send the completed application form, two copies of the local constitution, and a check for \$10 annual dues (made payable to the NAGWS Affiliated Boards of Officials) to the ABO Past Chairperson. Indicate the sports in which you wish to grant ratings by listing the names and qualifications of 3 interested individuals. Approval of the application will come from the Past Chairperson of the Affiliated Boards of Officials who will request that examination packets be sent to your Affiliated Board Chairperson for all sports in which your Board is authorized to give ratings. The process of accepting an application for affiliation of a new Board and of requesting that the

- proper examination packets be sent ordinarily takes several weeks. Prospective Boards, therefore, should file for affiliation at least 2 months before they wish to hold rating sessions.
5. Administer Form A of the National Theoretical Examination. Form B of the National Theoretical Examination may be administered to those who did not pass Form A. The Intramural Examination may be given as a practice test to those candidates pursuing ratings.
 6. To cover expenses involved in the construction and evaluation of written examinations, boards should charge a fee each time an individual takes a written examination. The Affiliated Boards of Officials Treasurer must receive 50 cents for each written examination given by a board. Board fees can exceed 50 cents per test in order to cover operating expenses.
 7. Conduct practice sessions in rating officials. All persons on the examining committee who have not previously rated officials should have a minimum of three practice sessions prior to actually rating. Secure the assistance of a rated official in these practice sessions if at all possible.
 8. Give practical examinations to individuals who pass the written examination. (Note minimum number of raters required to give various ratings on page 185.)
 9. Request appropriate rating cards from the NAGWS National Office for distribution to those who pass the theoretical and practical examination.
 10. Send lists of approved officials to schools and other organizations in the area. This notice should indicate the fees for officiating and should give the name, address, rating and telephone number of each official.
 11. Keep accurate lists of all persons receiving ratings. Forward these lists to the chairpersons of the Examinations and Ratings Committees in those sports in which your Board was authorized to give ratings. An appropriate form is included in each examination packet. Due date for submitting all forms to appropriate E&R personnel: June 1.

Adding Sports – Expansion of Services

Should a Board wish to add ratings in other sports, the Chairperson of the Board should write the Examinations and Ratings Chairperson (E and R) in that respective sport. (Note current *NAGWS Guide* for that sport to identify the name of the individual.) The Board should indicate the names of a minimum of 3 persons qualified to act as examiners in that sport for the next 2 years. Qualifications and experience in the sport should be listed for each potential examiner. Should your Board qualify, you will be

notified directly by the E and R Chairperson and will receive a packet for administering examinations.

Maintaining Affiliated Status

To maintain affiliated status in each sport in which it gives ratings, a Board must:

1. Pay dues each year to the ABO Treasurer. (Notification will be sent each fall.)
2. Submit a yearly report to each respective E and R Chairperson regarding the current status of rated officials. (Reports for each sport must be submitted by June 1. Appropriate forms are included in examination packets.)
3. Submit periodic accountings yearly to the ABO Treasurer as to how many examinations have been administered. (50 cents per each examination administered is due ABO.)

Note: Examination packets are mailed yearly to *qualified* boards on:

August 1 – Volleyball and Basketball

September 15 – Competitive Swimming and Diving, Badminton, Tennis

October 1 – Fencing

October 15 – Synchronized Swimming, Gymnastics

February 1 – Fast Pitch Softball & Slow Pitch Softball

If you do not receive your packet(s) within two weeks of the above dates, contact the designated E & R Chairperson for all sports. Exception: contact the National Office for Volleyball and Basketball packets.

TECHNIQUES OF OFFICIATING TENNIS*

Revised by the ABO PRINCIPLES AND TECHNIQUES OF OFFICIATING COMMITTEE

NOTE: Sections which have been reworded or clarified are designated by a check (✓). Changes in techniques have been indicated by shading.

DUTIES OF THE REFEREE

In the case of each tournament, the tournament committee elects the referee.

The referee shall —

1. Know and apply all the rules, being able to decide quickly and to take full responsibility for actions.
2. Have the power to appoint a substitute and may not umpire a match unless a substitute referee has been appointed.
3. Have the power to appoint and remove umpires, net umpires and linesmen, to assign courts and to start matches.
4. Decide any point of law which an umpire may be unable to decide, or which may be referred to the referee on appeal from the decision of an umpire. Such a decision is final unless reversed by the USTA Executive Committee.
5. Have the sole power to excuse a competitor from playing for a definite period.
6. Default a competitor who has not been excused and refuses to play when called upon to do so.
7. Postpone the match because of darkness or conditions of the ground or weather.
8. Give approval to postponement of a match by the umpire or order immediate continuation of the match.
9. Decide if an unfinished match is to be entirely replayed if the contestants are so agreed. (Rule 29)
10. Be present or arrange for a substitute during all play.
11. Sit beside the court alongside the umpire's chair during play of the finals and other important matches.
12. Give approval to the umpire's decision that new balls are necessary.

*Combination and digest of "(USTA) Tournament Regulations" and "Instructions for Tournament Officials" reprinted by permission from the *Umpires' Manual*, published by U.S. Tennis Association, 51 E. 42nd St., New York, NY 10017.

DUTIES OF THE UMPIRE

The umpire shall —

1. Have an exact knowledge of the Playing Rules, Tournament Regulations, and their proper enforcement and be responsible for the proper conduct of the match.
2. Be on hand and ready when the match is called.
3. Concentrate on the match and follow it keenly.
4. Be sure the court is correct, measure the net at the center and at the posts, and adjust the net during play if necessary.
5. Check that there is a full complement of chairs for linesmen placed opposite the various lines and not facing the sun (see diagram).

NOTE: Umpire's chair should be centered on the net about 5 feet from it with the seat not less than 5 feet from ground (preferably 7 feet).

6. Arrange for toss for choice of court and service.
7. Score the match and record points on a scorecard.
8. Call the score promptly and distinctly.
9. Direct the players to change courts in accordance with Rule 26 and 30b allowing them no rest or delay during the tie-break changeover.
10. Watch for and call any infraction of rules and stay with a decision when felt correct.

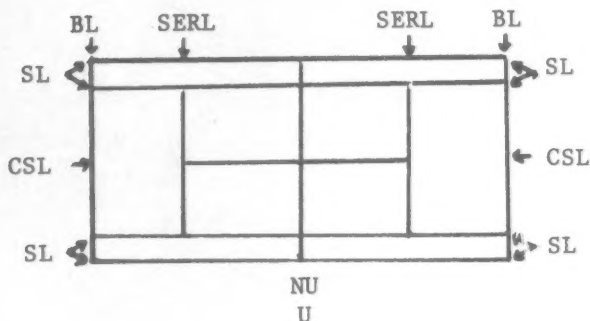


Diagram of Officials

BL — Base Linesman
SERL — Service Linesman
SL — Side Linesman

CSL — Center Service Linesman
U — Umpire seated on elevated stand
NU — Net Umpire seated by net post

11. Ensure that players serve from the proper court.
12. Ensure that players receive from the proper court.
13. Call service faults, lets, outs and foot faults only if there are no linesmen or net umpire.
14. Call a let and replay the point in accordance with Rule 23.
15. If appealed to by a player during a rally, say nothing.
16. Decide all doubtful or disputed strokes subject to decision of the linesmen, and all points of law subject to an appeal to the referee.
17. Decide when new balls are required, subject to approval of referee.
18. Uphold the decisions of linesmen and net umpire.
19. Order a point replayed when a linesman or net umpire corrects a decision if the call has affected the play of either side.
20. Decide, at times when a linesman or net umpire is unable to render a decision, or call a let and replay the point.
21. Announce the 10-minute intermission, noting time and name of player next to serve, and notify players 3 minutes before time is up. See that play is promptly resumed with all officials in place.
22. Suspend play due to circumstances not within the control of the players.
23. Postpone the match because of darkness or conditions of ground or weather, subject to approval of the referee.
24. Remove a linesman or net umpire for just cause, subject to final decision of the referee.
25. Do not let the gallery disturb the players. If it does, stop play and ask for cooperation of the spectators.
26. Sign the scorecard and deliver it to the proper authorities at the end of the match.

Calling the Match

General Suggestions

1. Have a scorecard, two soft pencils with erasers, and a copy of the current *NAGWS Tennis-Badminton-Squash Guide*.
2. Write the names of the competitors on the scorecard and be sure of their correct pronunciation.
3. Be able to project your voice so it can be heard easily by the gallery.
4. Allow the players warm-up time to be specific to the tournament being played.
5. After the warmup, announce: "This match is between Miss Jones and Miss Smith. Miss Jones serving. Linesmen ready? Play."
6. Call the name of each player as the ball is served for the first time.

The umpire's and line judge's calls only when the ball is in play. The quick intervention of players and/or spectators, usually, of course, all line calls should be made by the umpire's and line judge's calls only.

8. When the service falls into the net on the first serve, do not call a fault.
9. Act as the connecting link between the match and gallery; keep your eyes on the ball in play and concentrate attention on the correct calling of score and conduct of the match.
10. After a point is finished, first mark the scorecard and then raise your head and announce the score loudly and distinctly.

This is good advice for anyone in the early stages of umpiring, since it does reduce the hazard of miscalled scores. But within a few minutes a keenly interested umpire should be able to speed things up at no risk to accuracy by:

- (1) Keeping mind the score and which end served, during any change;
- (2) at the conclusion glancing at the card to confirm where he is going to make the next mark, and
- (3) almost simultaneously with the glance, call the score. Then mark. Make announcements sharp and clear with a brief pause after each syllable.

11. Hold the scorecard with the thumb of your left hand touching the line of the game being played.

12. Call the server's score first.

13. Although it is appropriate to use Mr., Miss or Mrs. in the first reference to the contestants, the present tendency is to be very sparing indeed in the use of those titles in subsequent references. Definitely those titles should not be used in calling of advantage points, but always use the player's name on these calls.

- ✓ 14. Call games as follows: "Game, Smith; she wins the first game." or "Game, Jones; she leads, three games to two, first set." or "Game, Jones. Three games to two, Smith leads, first set." ... "Game, Jones; games are three-all, first set."
15. Call set as follows: "Game and second set, Smith, seven-five; sets are one-all."
16. After the first set, announce the set score every three or four games.
17. In making announcements, the words to be emphasized are the names and the score.
18. At the finish of a match, announce: "Game set, and match—Smith; score 3-6, 12-10, 6-3." Always give the winner's score first.

TECHNIQUE OF SCORING

1. Record names of players in the proper space on the scoreboard.
2. After the order of service is determined, initial the spaces alternately on the scoreboard for the entire set. In case of a long duce game in which there are not enough squares in which to record the score, it is advisable to go into the next page on the right or on the back of the card, but never down the card where the next game goes.
3. Put players' initials at the top of the extreme right-hand column.
4. Points are recorded by means of pencil marks in the spaces beneath the word Points, putting the server's points on the top line and the receiver's on the second line, as illustrated in the scorecard.

Here is a suggested scorecard design that can accommodate (a) conventional scoring up to 16 games; (b) the 5-of-9 tiebreaker, and (c) Wimbledon 7-of-12 or WCT's 7-of-13.

[illegible]

DUTIES OF LINESMEN

A linesman is appointed by the referee and may be removed only by the referee.

The linesman shall —

1. Be on hand and ready when the match is called.
2. Not wear white or light clothes.
3. Be seated facing the line designated to watch and be alert and concentrate every instant the ball is in play.
4. Sit quietly during the play and not leave without the permission of the umpire or until replaced by another linesman.
5. Try to get out of the player's way to avoid interfering with a stroke.
6. Watch the line, not the ball. Sense where the ball will bounce and, if necessary, change position to see it.
7. Remember that "a ball falling on a line is regarded as falling in the court bounded by the line" (Rule 20).
8. *Call decisions loudly, sharply and with conviction. If applause will drown out the call, accompany the call with a motion of an arm in the direction that the ball lands out of the court.*
9. Call decisions as quickly as is consistent with accuracy.
10. Never call "out" until the ball has actually struck the ground or fixture outside the court.
11. Call only "out" or "fault," never "good."
12. Change a decision when it is realized an error has been made. The umpire must be told immediately and the umpire decides whether the point shall be replayed.
13. Call it to the attention of the umpire if a score is at variance with the linesman's decision.
14. Make a decision as the ball is seen and stick to it. The players, umpire and referee may never overrule the decision of a linesman on a question of fact.
15. Put hands over eyes if the player obstructs the view of the ball or line. The umpire makes the decision, asks another linesman or orders the point replayed.

The center service linesman shall—

1. Judge whether the server is standing on the proper side of the center service mark. If the server errs, call a foot fault.
2. Call a fault if the serve lands on the wrong side of center service line.

The service linesman shall—

1. Call a fault if the serve lands behind the service line.

The side linesman shall—

1. Judge whether the server is standing on the proper side of the sideline. If the server errs, call a foot fault.
2. Stand up when the service is to the court being watched.
3. Call a fault if the serve lands outside the singles sideline.

The base linesman as foot fault judge shall—

1. Thoroughly understand the foot fault rule.
2. Call a foot fault only when positive the rule has been broken.

The net umpire shall—

1. Sit near the net post and call: (a) lets on service, and (b) balls that go through the net, the call being "fault" or "through."
2. Place fingers lightly on the net cord during the service to detect service lets which may not be seen easily.
3. Keep a duplicate score of the match.
4. Call "not ups" when requested by the umpire.
5. Note when balls are to be changed and see that the balls are changed at the proper time.

INTERPRETATIONS

Questions concerning officiating techniques in tennis should be directed to:

ROSEMARY FRI
University of Northern Colorado
Greeley, CO 80639

TENNIS STUDY QUESTIONS 1978-1980

Revised by the ABO TENNIS
EXAMINATIONS AND RATINGS COMMITTEE

PART I

Directions: Indicate the umpire's decision for each of the following situations by selecting the one *best* answer from the five responses below. There is only one answer for each, and only the stated condition should be assumed. A refers to the server, and B refers to the receiver.

- SP — Server's point
- RP — Receiver's point
- F — Fault
- L — Let
- BCP — Ball continues to play

1. As Player A tosses a ball for the serve, a second ball slips from her hand. The served ball lands in the correct court and is returned by B.
2. Players A and D are competing against B and C. Player A is the first server for the team and assumes a position between the singles and doubles sidelines and behind the baseline. The first serve lands in the right service court.
3. The served ball strikes B on the foot before touching the ground.
4. Player A returns a ball with a volley. The racket slips out of her hand and follows the ball into B's court.
5. A lobbed ball, clearly traveling past the baseline, is caught by Player A, who calls "out."
6. Player B volleys the ball from outside the sideline.
7. Player B's partner is struck by the served ball.
8. Player B returns the serve and the ball hits the net post before bouncing into A's court.
9. During play, the ball is hit deep to the receiver's backhand. The ball breaks as it rebounds from the court. The receiver, in an attempt to return the ball, hits it out of the court. The receiver then requests a let.
10. Players A and D are playing B and C. Player D volleys the ball and in following through across the net strikes B's racket as a return is attempted. The ball lands in Player B's court.
11. Player A steps on a ball lying behind the baseline as she attempts her second serve. She swings and misses the ball.
12. The second serve bounces in the proper service court and strikes Player B's shoulder. The ball lands inbounds on Player A's court.

13. Player B stands in the alley to receive the serve. The served ball lands in the correct court.
14. At the beginning of the game, the first ball served strikes the net strap and then Player B's arm.
15. On the first serve, Player A tosses the ball forward and steps across the baseline to catch it.

PART II

Directions: For each question below, select the one item which is the *best* answer.

16. For which of the following is the umpire solely responsible?
 - A. Makes decision about when new balls are required.
 - B. Postpones the match because of darkness or bad weather.
 - C. Removes a linesman.
 - D. Signs the scorecard at the end of the match.
17. When may a doubles team alter its receiving order?
 - A. When the teams exchange ends of the court.
 - B. At the beginning of the new game.
 - C. At the beginning of the set.
 - D. At no time during the match.
18. The decision to utilize tie-break procedures during a tournament rests with which individual(s)?
 - A. The players.
 - B. The referee.
 - C. The umpire.
 - D. The tournament committee.
19. Which of the following officials is ultimately responsible for deciding whether a ball lands out-of-bounds?
 - A. Referee.
 - B. Umpire.
 - C. Linesman.
 - D. Any of the above.
20. With a game score of 30-love, the server commits a fault while serving to the left service court, then the error in the service court is discovered. What is the umpire's decision?
 - A. 30-love, the next serve will be delivered to the right service court.
 - B. 30-love, the next serve will be delivered to the left service court.
 - C. 30-15, the next point will be delivered to the right service court.
 - D. 30-15, the next point will be delivered to the left service court.

21. It is the responsibility of the umpire to do which of the following?
- A. Allow the players a maximum of five minutes for warmup.
 - B. Call the name of each player at the beginning of each game.
 - C. Call a fault when a serve falls into the net.
 - D. Repeat linesmen's calls only when they need reinforcing.
22. Player A served first at the beginning of the set. The score is tied at 6-all. A 5-out-of-9 tie-breaker procedure will be used to determine the winner of the set. Which of the following is true?
- A. Player B will serve the first point in the tie-breaker.
 - B. Players exchange courts after each point.
 - C. If the game goes to 9 points, Player A will elect the court from which she wishes to receive.
 - D. Players shall exchange courts at the completion of the tie-break game.
23. Which of the following is *not true* concerning doubles play?
- A. The serving order may be altered at the beginning of a set.
 - B. The receiving order may be altered at the beginning of the set.
 - C. Partners shall receive service in the right-hand court alternately for their team.
 - D. The first server for the team may also be the receiver in the left-hand court.
24. When does the umpire call "not up"?
- A. When the wrong server of a doubles team prepares to serve.
 - B. When a player fails to reach the ball on the first bounce.
 - C. When a player fails to resume play quickly.
 - D. All of the above.
25. The score is love-30. What does the umpire call when the server reaches across the net to hit a volley?
- A. "Error-love-40."
 - B. "Fault-love-40."
 - C. "Reaching over the net-love-40."
 - D. "Stroke-15-40."
26. Player A repeatedly bounces a ball before each serve. Player B is clearly annoyed. What is the umpire's decision?
- A. Direct Player A to serve without the preliminary bounces.
 - B. Declare that Player A has defaulted the match.
 - C. Consult the referee who will make the final decision.
 - D. Any of the above.
27. Which of the following is *not* a foot fault?
- A. The server shifts her foot across an imaginary extension of the center mark before she hits the ball.
 - B. The server steps on the baseline immediately after she hits the ball.

- C. The server makes a poor toss and must take several steps to hit the ball. She stays behind the correct half of the baseline.
D. The server steps on the baseline just as she hits the ball.
28. Players A and D are competing against B and C. Player A is the first server for the team. With a set score of 1-3 and a game score of 30-0, it is discovered that D is serving out of order. What is the correct decision?
- A. Set score 1-3; Player A serves from the right court.
B. Set score 1-3, 30-0; Player A serves from the right court.
C. Set score 1-3, 30-0; Player B serves from the right court.
D. Set score 1-3, 30-15; Player B serves from the left court.
29. Which of the following is true of official court measurements?
- A. The net posts in doubles should be 3 feet outside the doubles court.
B. The net shall be 3½ feet high throughout its length.
C. The service lines shall be parallel to and 18 feet from the net.
D. The center mark shall be drawn outside the court and at right angles to the baseline.
30. Which of the following is true of the VASSS single point scoring system?
- A. Players serve four consecutive points before the serve changes.
B. Players change courts after every odd "hand."
C. Players change courts at the end of the set.
D. All of the above are true.

EXAMINATION INQUIRIES

Inquiries concerning these Study Questions or Theoretical Examination questions should be directed to:

DEAN SUMMERS
HPER Bldg. 112G
Bloomington, IN 47401

201

ANSWERS AND RULE REFERENCES

PART I

<i>Answer</i>	<i>Rule Reference</i>
1. L	6, Case 2
2. BCP	32
3. SP	16a
4. RP	18e
5. RP	18g, Explanation
6. BCP	15, 18c
7. SP	37
8. BCP	22a, Case 1
9. L	12, Case 2
10. L	19, 23
11. RP	9
12. SP	18g
13. BCP	4, Case 2
14. L	13a
15. F	7

PART II

16. D	P & T of O, Dut. Umpire
17. C	34
18. D	Tie-Break
19. C	P & T of O, Dut. Line, 14
20. A.	8a
21. D	P & T of O, Call Match, #4, 6, 7, 8
22. C	Tie-Break
23. C	33, 34
24. B	P & T of O, Call Match, #21
25. C	P & T of O, Call Match, #22
26. A	39, Explanation
27. B	7a, 7b
28. B	35
29. A	1
30. B	VASSS Single Point

TECHNIQUES OF OFFICIATING BADMINTON

Revised by the ABO BADMINTON PRINCIPLES AND TECHNIQUES OF OFFICIATING COMMITTEE

Changes in techniques have been indicated by shading.

DUTIES OF THE REFEREE

In each tournament the chairman or committee in charge shall appoint a referee to act for them in regards to rules, scoring and regulating play.

The referee shall—

1. Be in complete charge of match play except for the scheduling of the time and place of matches.
2. Be thoroughly familiar with, and rigidly enforce, the official laws of badminton, and the interpretations which are a part of the laws.
3. Have the authority and responsibility to appoint and remove umpires, linesmen and service judges.
4. See that the playing area, nets, posts, shuttles, etc., meet the requirements of the laws of badminton.
5. Be the final authority on appeal from the decision of the umpire, with authority to reverse the umpire's decision involving a point of law only. The scoring of a match can be affected only if the appeal is made to the referee before the next service is delivered.
6. Be present or available at the playing area at all times during match play, or shall be specifically represented by a deputy appointed by the referee.

DUTIES OF THE UMPIRE

The umpire has three main responsibilities: *To officiate the match for the player, to link the match with the spectators and to score the match.*

The umpire shall—

1. Thoroughly know the laws of badminton.
2. Have the final decision on all points of fact. A player may, however, appeal to the referee on a point of law only.
3. Recognize the linesman's decision as final on all points of fact on that linesman's designated line. The umpire cannot overrule the linesman. If a linesman is unsighted, the umpire may then give a decision if possible; otherwise, a let should be played.
4. Recognize a service judge's decision as final on all points of fact in connection with the delivery of the service as set out in

Service Court Judge, 2. The umpire is responsible for calling the receiver's faults.

5. Call the score distinctly and loudly enough to be heard clearly by players and spectators. Call promptly and with authority. If a mistake is made, admit it, apologize, and correct it.
6. Score the match and record points on a score pad. When a point is finished, first mark the score, then see that the server changes courts and announce score before the next service. (If the umpire possesses less than a NAGWS National rating, the umpire may ask the service court judge to keep a duplicate score.)
7. Never ask spectators about a decision or be influenced by their remarks. If a decision cannot be reached, a let should be awarded.
8. Be responsible for all lines not covered by linesmen. (If at all possible, one person should be assigned to lines which the umpire is not in a favorable position to see.)
9. Firmly control the match without being officious. Keep play flowing without unnecessary interruptions while ensuring that the laws are observed. The game is for the players.
10. Allow the game to proceed, and do not call a "fault" when a doubt arises in the mind of the umpire or service judge as to whether an infringement of the laws has occurred. (The player has benefit of the decision.)
11. Be sole judge of any suspension of play and have the right to disqualify an offender for leaving the court or delaying the game (Law 22).
12. In the absence of a referee, appoint linesmen and service judges.

Before the Match—

13. Obtain the score pad from the referee. Enter player's position and receiver and server on the scorecard.
14. Check the net for height. See that the posts are on the lines and that tapes are correctly placed (Laws 2 and 3).
15. Ensure that the linesmen and service judges are correctly placed and know their jobs (see Linesmen and Service Court Judge).
16. Ensure that a sufficient quantity of tested shuttles (according to Law 4) is readily available for the match in order to avoid delays during play. If the players cannot agree, the umpire should have the shuttles tested; in a tournament, the umpire should refer to the referee; in a match, the captains or referee. Once shuttles have been found to be acceptable, ensure that they are used unless circumstances alter.

Starting the Match—

17. Ensure that tossing is correctly carried out and that the winners and losers correctly exercise their options under Law 6.

18. Mark on the score pad for doubles the names of the players starting in the right-hand service courts. This enables a check to be made at any time to see whether the players are in their correct service courts. During the game, if the players get in their wrong service courts unnoticed, so that they have to stay there (Law 12), change the score pad accordingly.

During the Match—

19. See that no unnecessary delay occurs, or that the players do not leave the court without the permission of the umpire (Law 22). The umpire or the service court judge must determine if a delay of game is made by the server by taking more than five seconds to deliver the serve after both the server and receiver have taken their stance. A warning must be given for the first infraction of this rule in any match.
20. Record the score, server and the correct service courts of the players on the score pad if an unavoidable holdup occurs in a match (Law 22c).
21. Call a let if a shuttle or other object not connected with the match in progress invades the court or its environs, or a spectator interferes with the players.
22. Watch for faulty serving if there is no service judge. It is difficult to detect from the chair "serving above the waist" or "racket head above the hand." If there is any doubt, caution the player and ask for a service judge.
23. If no service judge is available, see that the *server* has both feet on the floor in a stationary position inside the service court when the shuttle is struck, and that there is no feint (Law 14d and Interpretation 1).
24. See that the *receiver* has both feet on the floor in a stationary position inside the service court until the service is delivered, and that the receiver does not move before the shuttle is struck (Laws 14c and 16).
25. Watch for double hit or faulty stroke under Law 14h. These should be immediately called by the umpire as "fault."
26. Watch for obstruction — for instance, sliding under the net; throwing the racket into the opponent's court; balking or unsighting an opponent during services (see Laws 14d, 14j, 16, 20, and Interpretation 5). Immediately call "fault, obstruction."
27. Watch for serving and receiving out of turn or from the wrong court. Law 12 should be thoroughly understood. When the rally has been completed, call "fault, service" or "fault, receiver," whichever the case may be.
28. Watch for striking of the shuttle before it crosses the net, and hitting the net with racket, person, or dress while the shuttle is in play (Laws 14f and 14g). Call "fault" immediately.

29. See that the option of "setting" is correctly exercised (Law 7).
30. See that the players change ends following each game and at the correct score in the third game (Law 8).
31. See that the winning side serves first.
32. Watch for a player interfering with the correct speed of the shuttle. The player should be warned and the shuttle discarded if necessary.
33. Do not allow players to call "no shot," "fault," "carry," etc.; warn them if they do, as it may distract their opponents. On no occasion should the umpire use the terms "no shot," "foul," or "no." Always use the term "fault."
34. Provide for the correct interval between the second and the third games where allowed.
35. **Allow a maximum of five minutes during a match for equipment repair.**
36. **Allow only one injury time out per person per match. A maximum of ten minutes shall be allowed for injury, and, if injured a second time and unable to immediately continue playing, a player must default the match.**

At the End of the Match—

37. Announce winners and scores. Sign and turn in scorecard.

Calling the Match

1. When the players have finished warming up, announce—
 - a. In a tournament:
 - 1) "final or semifinal of . . ." If neither, say nothing.
 - b. In a tournament or match:
 - 1) Names of players with country, county or club where applicable.
 - 2) Name of the first server, and in the case of doubles, of the receiver.
 - 3) To start the match, call "love all, second service, play" in doubles; but "love all, play" in singles.
2. The umpire shall call the score immediately after marking the scorecard upon completion of play. Always call the server's score first.
3. Singles — when a player loses service, call "side out" followed by the score in favor of the new server.
4. Doubles — whenever the first server is serving, only the score will be called. When the second server is serving, call the score and "second server" for each point.
5. When a side reaches 14, or in the case of ladies singles, 10, call on the first occasion only "game point" or "match point." If a further game or match point occurs after setting, call it again on the first occasion. Game point or match point should always

immediately follow the server's score where applicable, and precede the receiver's score.

6. When a linesman calls "out," or the shuttle falls outside a line for which the umpire is responsible, call "out" before calling the score.
7. When the option to set occurs, ask the player's or players' decision. Announce the decision loudly so that spectators can hear, calling "set 2 points," or 3 or 5 as appropriate, followed by "love-all."

At the End of the Game—

8. Announce "game to ..." (the name[s] of the player[s] in a tournament or the name of the team represented — in the case of a meeting of representative teams) followed by the score — winner's score first — and, if appropriate, by "one game all." In the case of a match in a meeting between two teams, always define the contestants by the names of the actual players.
9. In the event of set games, announce the total game points, i.e., 12-9, 18-13.
10. At the end of the match announce "game and match to ..." (the name[s] of the winner[s] and all scores).

Scoring the Match

The contestants' name should be entered on the horizontal lines of the scorecard.

A vertical line drawn through both scoring columns indicates service over.

At the beginning of a side's term of service, their existing score should be carried over and noted. *Note:* the "0" and the second "5" in part 4 in the singles scoring given below.

In regard to setting, the decision not to set is indicated by writing "no set" on the scoresheet at the point where the setting possibility occurs (see In setting, 1).

On a decision to set, draw a vertical line through the scoring column of the serving team and write the option on the scoresheet where the setting possibility occurs.

A double vertical line is drawn through both scoring columns and the final score entered to the right of the scorecard when the game is ended (see In setting, 2).

In singles:

1.	Jones/	0	1	2	3	4	5	
	Smith/							

Jones serves and makes 5 points; then

2.

Jones/	0	1	2	3	4	5	
Smith/							0

Jones loses the serve;

3.

Jones/	0	1	2	3	4	5	
Smith/							0 1 2

Smith scores 2 points;
then

4.

Jones/	0	1	2	3	4	5	
Smith/							0 1 2

Smith loses the serve.

In doubles:

The initial server for each team shall be listed first.

To indicate the completion of one service, draw a circle around the last point (number) made by the first server. This will clearly designate the point at which the second server begins the term of service.

1.

Smith-Jones/	(0)	1	2	3	
Reed-Brown/					0

Smith-Jones commence serving, win 3 points, and lose the serve;

2.

Smith-Jones/	(0)	1	2	3	
Reed-Brown/					0 1 2

Reed-Brown win 2 points after obtaining the serve.

3.

Smith-Jones/	(0)	1	2	3	
Reed-Brown/					0 1 (2)

Reed-Brown lose the point, second serve.

4.

Smith-Jones/	(0)	1	2	3		3
Reed-Brown/					0 1 (2) 3 4 5	

Reed-Brown win 3 more points and then lose the serve.

In setting:

1.

Smith-Jones/		1	3			13
Reed-Brown/				(11)	12	13 14

No set

Smith-Jones have option to set all 13-all, decide not to set; no set is written at the current server's score of 13. They score a point, then lose the serve.

2. Set 3

Smith-Jones/	13					(13)	14	12			16
Reed-Brown/		(11)	12	13	14					1 2 3	17

Smith-Jones win a point and score is 14-all. Reed-Brown have option to set and set 3. This is written above the server's current score (14) and a line is drawn through the serving team's (Smith-Jones) scoring column. Further scoring starts at 1, etc.

200

DUTIES OF THE SERVICE COURT JUDGES

The service court judges shall—

1. Sit on a low chair on the side of the court opposite the umpire. One service judge will sit on one side of the net while the other judge sits on the other side of the net. The service court judge should observe the legality of the serve by the server on the opposite side of net.
2. Be responsible for seeing that the server, at the moment of striking the shuttle—
 - a. Does not have any part of the head of the racket above any part of the hand holding the racket (Law 14a).
 - b. Does not have the shuttle above the waist (Law 14a).
 - c. Has both feet in a stationary position on the floor inside the service court (Law 16).
 - d. Does not feint (Law 14d and Interpretation 1).

(Note: To enable the service court judge to determine if the shuttle was legally contacted below the waist, the following technique is recommended. A piece of paper, cardboard, or like material can be held in such a way that the server's body from the waist up is completely blocked from vision. If the bird is contacted below the waist, the judge will see the bird. If the bird is not visible, an illegal serve was made.)

3. If the server does not comply with all the points in item 2 above, the service judge should immediately call "fault" loudly, and ensure that the umpire has heard the call. Note: The umpire watches the receiver.
4. Determine whether the server delays the game by taking more than five seconds to deliver the serve after the server and receiver have taken their positions. A warning must be given for the first violation of this rule in any match (Law 14d; Interpretation #1).
5. Assist in keeping score if necessary.

DUTIES OF THE ROVING SERVICE JUDGE

The roving service judge shall—

1. Wear an arm band or recognizable badge.
2. Move among the courts observing the services that are being executed in each match.
3. Take a position by the net post of any match in which service faults may be occurring.
4. Upon observing a service fault call a "let" and then warn the server and explain the nature of the fault.
5. If the server in question fails to comply with a legal serve (Duties of Service Court Judge, item 2), the roving service judge shall call a "fault."

DUTIES OF THE LINESMEN

The linesmen shall—

1. Sit on chairs in prolongation of their lines, at the ends of the court and at the side opposite the umpire.
2. Be entirely responsible for their designated lines. If the shuttle falls out, no matter how, call "out" promptly in a clear, loud voice. The linesman should reinforce the call by extending both arms horizontally at shoulder level with the right arm pointing to the right and the left arm to the left. If the shuttle falls in, say nothing but point in the direction of the court with a one-hand motion. The signal will assure the umpire that the linesman has seen the shuttle. If unsighted, the linesmen shall immediately place their hands over their eyes. *Note:* Notice where the cork of the shuttlecock lands in making a decision. A flat-angled shuttlecock may be out although the feathers are well inside the court line. Also, watch the line, not the shuttle. In watching a moving object, a stationary one may be lost. At the first indication that the shuttle may strike near your line, switch your gaze from the shuttle to the area where you expect it to land.
3. Never make a call until the shuttle has actually struck the ground outside the court.
4. If the cork touches any part of the line, it is in. Change a decision whenever necessary by voicing it before the next service.
5. If three linesmen are available, two should take a back boundary line and (in doubles) long service line each; the third; the side lines farthest from the umpire. If additional linesmen are available, they should be used according to the umpire's preference.

INTERPRETATIONS

1. When officiating, the umpire shall enforce the laws of badminton. In the absence of an umpire the players concerned shall carry out the laws, and if a violation be claimed by one side and not acknowledged by the other, a let shall be allowed. Umpires are recommended for all semifinal or final matches in any championship tournament.
2. In order to eliminate service faults in the early rounds prior to the semifinals or quarter-finals, a qualified service judge may be provided to act as a *roving* service judge who should be provided with an arm band or recognizable badge. The players should be informed of this judge. The roving service judge shall assume a position by the net post of a match in question, and on observing a service fault call a let. This judge will then warn the

server and explain the nature of the fault. If the server continues to commit an illegal service the roving judge shall call a fault on the server.

3. If the receiver is faulted for moving before the service is delivered or for not being in the correct service court (see Laws 16 or 14c), and at the same time the server is also faulted for a service infringement (see Laws 14a, c, h, or 16) it shall be a let. If any player feints or intentionally balks an opponent, even before the delivery of the service (see Law 24d), the fault shall be recorded against the player concerned.
4. Service foot faults: Clarification of Law 16.
 - a. Any forward step of either foot, or any other foot movement, must be completed and both feet must reach a stationary position on the floor prior to the start of racket motion to serve. "Start of racket motion" includes the backswing.
 - b. Part of Law 16 reads "some part of both feet of these players must remain in contact with the ground in a stationary position until the service is delivered." The following three questions were asked and it has been ruled that points raised do not constitute a breach of the law. Accordingly, players should not be faulted for these actions.
 - (1) Does this mean that the same part of a foot must remain in contact with the ground, or could it be a different part of the same foot?
 - (2) If the back foot of a server starts with the toe and heel in contact with the ground and rises onto the toe as the service is struck, with the heel rising straight, is this in order?
 - (3) On the other hand, if the heel comes off the ground and swivels through an angle of 90 degrees, as is frequently done, which means that the part of the toe remaining in contact with the ground swivels and moves, is this correct?
5. Service terminology: Law 14d states "If before or during the delivery of the service, any player makes a preliminary feint or otherwise balks an opponent, it is a fault." Webster's Second International Dictionary defines the terms "feint" and "balk" as "a feint is an assumed or false appearance . . . a mock blow or attack," and "a balk is a failure of a competitor to jump, vault, or the like, after taking a preliminary run . . ." The service may be regarded as started when both players have taken stationary positions in readiness to serve and to receive. From that point until the shuttle is struck by the server, Law 14d applies. A

motion to be considered a feint or balk must have some element of deception, it must not be some characteristic motion that has no purpose and does not deceive the receiver.

6. Calling faulty hits: Slow motion films have shown that practically all sharply hit shuttles strike the racket twice. The cork hits the racket, then the shuttle quickly reverses ends, and the feathers brush the gut as the shuttle leaves the racket. The motion is so fast that it seems to be a single hit. It is important for the umpire to recognize that illegal hits are a matter of degree and judgment and to give the hitter the benefit of the doubt.

INTERPRETATIONS

Questions concerning officiating techniques in badminton should be directed to:

MYRNA STEPHENS
Illinois State University
Normal 61761

213

BADMINTON STUDY QUESTIONS 1978-80

Revised by the ABO Badminton
Examinations and Ratings Committee

PART I

Directions

Select the one item which best answers each question. Assume no conditions exist other than those stated. Team A is always serving. Team B is always receiving.

- Which of the following constitutes a fault on the serve?
 - The shuttle is contacted below the server's waist.
 - The served shuttle passes over the net and lands in the diagonally opposite service court.
 - The server slides the rear foot forward during the service delivery.
 - The shuttle is struck on the frame of the server's racket.
- In which of the following situations would only one player of a doubles team have the right to serve?
 - In ladies' doubles, when the score is tied at 13-all
 - At the start of each game
 - After changing ends at 8-all in the third game
 - At the start of the first game only
- When can the umpire overrule the call of a linesman?
 - At a time when the linesman makes an error
 - At no time during a match
 - At match-point in the third game
 - At the first sign of the linesman's inattention
- Team A was the first to reach the score of 13; team B tied the score at 13-all; team A elected not to set. The score is now 14-all. Which of the following is correct?
 - The game must be played to 15 as the game was not set at 13-all.
 - The game may be set at 5 or may be played out to 15.
 - The game may be set at 3 or may be played out to 15.
 - The game may be set and the teams continue to play until one team is ahead by 2 points.
- When should players change ends in the third game?
 - After the leading score has reached 7 in a game of 15
 - After both sides reach a score of 6 or better in a game of 11
 - After both sides reach a score of 10 or better in a game of 21

- D. Immediately after it is discovered that the players erred and failed to change ends at the proper time
6. Which of the following statements related to scoring is correct?
 - A. A 'set' ladies' singles game is always played to 12 points.
 - B. Both men's and women's singles games are played to 11 unless a 'set' situation occurs.
 - C. In a 'set' situation, the server has the choice whether to set.
 - D. In championship play, a match is determined by the best 3 out of 5 games.
7. Which statement describes the correct speed of the shuttle?
 - A. The shuttle is from a newly-opened tube.
 - B. The shuttle is mutually acceptable to both teams.
 - C. A player of average strength stands on one back boundary line and hits the shuttle with a normal underhand stroke to a point not more than 2'6" short of and not less than 1' from the other back boundary line.
 - D. The same as C, except that the player uses an overhead stroke.
8. The team winning the toss at the start of a match chooses not to serve first. What option is available to the other team?
 - A. Must serve first and must choose ends
 - B. May only serve first
 - C. May request a repeat of the toss
 - D. Must serve first and may choose ends
9. Which of the following is a requirement for a legal serve?
 - A. All parts of the racket head must be below all parts of the racket hand.
 - B. All parts of the racket must be below the server's waist.
 - C. The server's feet must be kept on or within the lines of the respective service court.
 - D. The shuttle must be held by the feathers before delivery.
10. Which of the following constitutes a fault during play?
 - A. A player contacts the shuttle outside the boundaries of the court.
 - B. A player's racket passes over the net after striking the shuttle.
 - C. A player's clothing touches the net during a rally.
 - D. A player completely misses the shuttle before that player's partner returns the shuttle safely.
11. At which point should a 'let' be called on the serve?
 - A. The shuttle touches the net on passing over and lands within the diagonally opposite service court.
 - B. The shuttle passes over and then gets caught in the net.
 - C. Following an attempt to return the serve, the receiver claims not to be ready.

- D. The server serves from the wrong court and loses the rally.
12. The shuttle, struck by team A, hits the net and falls back; team B then strikes the net with the racket. What is the decision?
- A. A 'let' is called.
 - B. A fault on team B is called.
 - C. Team A loses the rally.
 - D. A point is awarded to each side.
13. In the United States, for how long and at what time is play suspended?
- A. For 5 minutes between the second and third games, only if both teams request the suspension.
 - B. For 5 minutes between the second and third games, if one or both teams request the suspension.
 - C. For 5 minutes between the second and third games, regardless of the wishes of the players.
 - D. For an indefinite period if one of the players is too fatigued to continue immediately.
14. If a spectator supporting team A throws an object on the court disrupting a rally, what is the duty of the umpire?
- A. To disqualify team A
 - B. To award the rally to team B
 - C. To warn team A of possible disqualification and to award the rally to team B
 - D. To call a 'let'
15. If a player hits the shuttle twice in succession, who is entitled to call the fault?
- A. The offending player
 - B. The referee
 - C. Either the offending player or the referee
 - D. The umpire
16. After a point is scored, which sequence of procedures should the umpire immediately follow?
- A. Mark the score, see that all players are ready, then call the score.
 - B. Call the score, see that all players are ready, then mark the score.
 - C. Mark the score, see that the receivers change courts, then call the score.
 - D. Mark the score, see that the servers change courts, then call the score.
17. Team A strikes the shuttle at the net, and the referee is not sure whether or not team A reached over the net in so doing. What is the correct course of action for the referee?
- A. Ask team A to admit the fault.
 - B. Abide by the umpire's decision.

- C. Call a 'let.'
- D. Call a fault on team A.
- 18. When is a shuttle considered to have landed in the court?
 - A. The cork hits the line and the feathers land outside the line.
 - B. The feathers hit the line and the cork lands outside the line.
 - C. The shuttle lands outside the line but immediately bounces within the line.
 - D. The shuttle's point of contact could not be determined.
- 19. What should a roving service judge do on seeing a service fault?
 - A. Call the fault.
 - B. Report the fault to the referee.
 - C. Report the fault to the umpire.
 - D. Warn the offender, after calling a let.
- 20. Which of the following is *not* a duty of a linesman?
 - A. Calling "good" if a player questions an obviously good shot
 - B. Covering the eyes if the shuttle was unsighted
 - C. Pointing toward the court if the shuttle lands in the court
 - D. Extending both arms horizontally while calling 'out' if the shuttle lands outside the court
- 21. When a team loses its first service at 10-all, what mark should the scorer make on the scoresheet?
 - A. A vertical line through both scoring columns
 - B. The next higher score for the server
 - C. A circle around the serving team's score
 - D. A line through the receiving team's score
- 22. During service, which one of the following motions of the server's toe is allowable?
 - A. Sliding forward
 - B. Swiveling in place
 - C. Sliding backward
 - D. Lifting off the floor
- 23. What is the correct height of the net at the posts?
 - A. 5'2"
 - B. 5'1"
 - C. 5'0"
 - D. 4'11"

PART II

Directions

Each of the following presents a situation which would require one of the decisions listed below. Assume no conditions exist other than those stated. Team A is always serving. Team B is always receiving.

A. Point

C. Second service

B. Let

D. Side out

24. Team A scores a point to reach 7. In the middle of the next rally, team B stops play to point out, correctly, that team A had served from the wrong court on the preceding rally. What is the decision?
25. The server is faulted for balking while, simultaneously, the receiver is faulted for leaving early. What is the decision?
26. Team A, in first service, returns a smash into the net, whereupon team B is called for double hit on the smash. What is the decision?
27. Player A scores to reach 7 and wins the next rally also. Immediately, player B appeals to the referee, who saw the play, that player A had faulted on service to reach 7. What is the decision?
28. Team B complains to the umpire after losing a rally that team A feinted on service. The service judge rules that the motion was characteristic and undecieving to the receiver. It was first service. What is the decision?
29. In a singles game, player B wins a rally with a shot which is clearly neither caught nor slung nor hit twice, but about which the umpire has doubt. What is the decision?
30. In a singles game, player A smashes so that the shuttle lands with only the cork in the court. What is the decision?
31. On first service team A is called by the service judge for high serve, but the umpire feels that the serve was legal. What is the decision?
32. In a singles game, player A's smash strikes the net and falls back, but player B catches it before it hits the ground. Player A claims the point, saying that player B interfered with the shot during play. What is the decision?
33. The server, in attempting to serve, strikes the shuttle with the elbow. What is the decision?
34. On second service, team A's smash hits a player of team B who has fallen entirely out of the court. Team B argues that the shot was clearly out. What is the decision?
35. In rushing a low singles serve, player B's racket contacts the shuttle, then passes over the net and narrowly misses the face of player A, obstructing player A's vision. What is the decision?

PART III

Directions

The following are duties that need to be performed by one of the officials of the game. Select the official who is responsible for that particular duty. Each official may be used many times, or not at all. Only one answer is correct for each question.

- | | |
|------------|------------------|
| A. Referee | C. Linesman |
| B. Umpire | D. Service judge |
- 36. Sees that the shuttles are of the legal speed.
 - 37. Has the final decision as to whether a player did or did not reach over the net.
 - 38. Has the final authority on the interpretation of the rules of service.
 - 39. Sees that the net is of the proper height.
 - 40. If possible, gives a decision if a linesman was unsighted.
 - 41. Sees that the court is of the proper dimensions.
 - 42. Keeps the score.
 - 43. Sees that the receiver does not move before the serve.
 - 44. Sees that the shuttle is not above the server's waist on the serve.
 - 45. Has the right to default a player for delaying the game.

INQUIRIES

Inquiries concerning these study questions or theoretical examination questions should be directed to:

DIANE HALES
1421 Niagra
Claremont, CA 91711

219

ANSWERS AND RULE REFERENCES

PART I

Answer Rule Reference

1. C Law 14k,16
2. B Law 11
3. B Tech. Off., Duties of Ump. #3
4. C Law 7a,c
5. D Law 8
6. A Laws 7,8
7. C Law 4
8. A Law 6
9. A Laws 14,16
10. C Law 14
11. B Laws 12,17a,b
12. C Law 19
13. B Law 22
14. D Tech. Off., Duties of Ump. #21
15. D Tech. Off., Duties of Ump. #33
16. D Tech. Off., Duties of Ump. #6
17. B Tech. Off., Duties of Ump. #2
18. A Tech. Off., Duties of Linesm. #2,4
19. D Tech. Off., Duties of Roving S.J.
20. A Tech. Off., Duties of Linesm. #2
21. C Tech. Off., Scoring the Match
22. B Tech. Off., Interp. #4
23. B Law 3

PART II

Answer Rule Reference

24. A Law 12
25. B Law 17c
26. A Law 14h
27. A Tech. Off., Duties of Ref. #5, Duties of Ump., #2
28. A Tech. Off., Interp. #5
29. D Law 14h, Interp. #6
30. A Tech. Off., Duties of Linesm. #2
31. C Tech. Off., Duties of Ump. #4
32. D Law 19
33. B Law 18

34. A Law 14i
35. A Law 14j

PART III

Answer Rule Reference

36. A Tech. of Off.
37. B Tech. of Off.
38. A Tech. of Off.
39. A Tech. of Off.
40. B Tech. of Off.
41. A Tech. of Off.
42. B Tech. of Off.
43. B Tech. of Off.
44. D Tech. of Off.
45. B Tech. of Off.

NAGWS SPORTS LIBRARY

SPORTS GUIDES, RULEBOOKS, TIPS & TECHNIQUES BOOKS

See listing inside front cover.

SCOREBOOKS

Available for basketball, field hockey, softball and volleyball

SELECTED SPORTS ARTICLES

Available for archery, basketball, field hockey, gymnastics, lacrosse, and riding.

NAGWS AND AIAW SPECIAL PUBLICATIONS

AIAW HANDBOOK and DIRECTORY

BIBLIOGRAPHY OF RESEARCH INVOLVING FEMALE SUBJECTS

EQUALITY IN SPORT FOR WOMEN

WOMEN'S ATHLETICS: COPING WITH CONTROVERSY

FUNDAMENTALS OF ATHLETIC TRAINING FOR WOMEN

LEAGUE CONSTITUTION AND BYLAWS FOR GIRLS INTER-SCHOLASTIC SPORTS - A SUGGESTED GUIDE

MOTIVATION IN COACHING A TEAM SPORT

NAGWS RESEARCH REPORTS II and III

RIDING STANDARDS (Revised 1978)

RELATED AAHPER PUBLICATIONS

COMPLYING WITH TITLE IX IN PHYSICAL EDUCATION AND SPORTS

DEVELOPMENT OF HUMAN VALUES THROUGH SPORTS

DRUGS AND THE COACH

THE WINNING EDGE (sports psychology)

NUTRITION FOR ATHLETES

PROGRAMS THAT WORK - TITLE IX

RULES FOR COEDUCATIONAL ACTIVITIES AND SPORTS.

SPORTS SKILLS TEST MANUALS (for archery, basketball, softball, volleyball)

INTRAMURAL IDEAS

INTRAMURAL PORTFOLIO

SAFETY IN TEAM SPORTS

SAFETY IN INDIVIDUAL AND DUAL SPORTS

SAFETY IN AQUATIC ACTIVITIES

For current prices and order information, write AAHPER Promotion Unit, 1201 16th St., N.W., Washington, D.C. 20036.